ADOLESCENT WRITING DEVELOPMENT: IMPROVING SUCCINCTNESS USING THE EXTENDED NOUN PHRASE

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Abstract

This study examined to what extent teaching Year 9 students strategies to increase succinctness in their expository essays changed the lexical density and syntactic complexity of their subsequent essays. Widely used in student assessment, the expository essay is a key academic genre and skilled performance in the genre is an important educational outcome. The ability to write clear, accurate and succinct sentences is an essential pre-requisite to skilled performance at the whole-text level. Thus, the study sought to investigate an approach to improving an aspect of writing outcomes for adolescent students in an important academic genre.

The study used a mixed methods design. The methodology combined a quasi-experimental intervention and an interpretivist approach. Using Myhill, Jones, Lines and Watson's (2012) model of contextualised grammar pedagogy, teachers taught intervention students strategies to improve succinctness, including nominalisation and replacing dependent clauses by extended noun phrases. A one-draft pre-intervention essay was compared to an assignment-conditions post-intervention essay on measures of lexical density and syntactic complexity. Repeated-measures ANOVAs were carried out to compare changes in lexical density and syntactic complexity across the two essays and across control and intervention groups. A thematic analysis of semi-structured teacher interview scripts explored links between the changes to student texts and teaching approaches the students had experienced.

The key findings of the study were that mean lexical density improved from the one-draft essay to the assignment conditions essay in both control and intervention classes. In contrast, syntactic complexity decreased between the two essays. No statistically significant differences were found between the control and

intervention classes' mean changes. No link between the intervention and changes to lexical density and syntactic complexity in the students' texts was demonstrated. Analysis of the interview data suggested that there were strong similarities in teaching approaches across the four classes. Furthermore, the intervention class teachers believed that more time was needed for students to understand and implement the strategy to change dependent clauses to extended noun phrases. The study results suggest that secondary school students' writing skills would benefit if students understood increased syntactic complexity as a goal of redrafting in assignment writing.

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List of Abbreviations

ACARA Australian Curriculum, Assessment and Reporting Authority

ANOVA Analysis of Variance

NAPLAN National Assessment Program Literacy and Numeracy (Australian Curriculum and Reporting Authority)

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

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Chapter 1: Introduction

1.1 Introduction

Good writing skills are important for access to education and employment (Cremin & Myhill, 2012, p. 10[1]; Graham & Perin, 2007b, p. 331), and yet many students underperform in this area, a sizable number of them failing even to reach basic standards as judged by national testing in Australia, the US and the UK. More effective writing pedagogy can contribute to improving educational outcomes by enhancing students' ability to demonstrate their learning and to use writing as a tool for learning. One pedagogic approach proposed as a solution for poor standards of writing achievement is the teaching of grammar (Myhill & Watson, 2014, p. 42). The role of grammar instruction in improving students' writing skills has been debated over at least the last fifty years (Myhill, 2005, p. 77). In recent times the debate has been rekindled by the publication of a metastudy by Andrews et al. (2006) that concluded that empirical evidence to support a connection between teaching grammar and improved writing skills was lacking. However, at the same time, teaching grammar as part of mandated national English curricula has been reinstated in England and Australia (Myhill, 2005, p. 77). The current Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) proposes a model in which knowledge about language is "placed at the core of classroom practice" (Derewianka, 2012, p. 127). In this curriculum, the Knowledge About Language strand includes explicit knowledge about grammar within a

[1] I have chosen to provide page numbers for referring to ideas contained in other works throughout the document. While contemporary practice is increasingly to use page numbers for direct quotations only, the publication manual of the American Psychological Association (6th edition, p.171) encourages writers to provide page numbers where it may "help an interested reader to locate the relevant passage in a long or complex text".

language in context model (Derewianka, 2012, p. 129). Australian scholars Love, Sandiford, Macken-Horarik and Unsworth (2014, p. 45) suggest that a contextualised grammar pedagogy is the most appropriate for teaching the Knowledge About Language strand of the Australian Curriculum: English. Can grammar teaching in this form improve writing outcomes for students?

A recent study in England showed that a contextualised grammar approach to teaching writing improved student writing outcomes. Jones, Myhill and Bailey (2013) argue that the studies upon which Andrews and his colleagues (2006) based their conclusions examined learning situations in which grammar was taught separately from writing, and students were assumed to be able to transfer the grammar learning to the writing tasks. The recent large empirical study by Myhill, Jones, Lines and Watson (2012) showed that students' writing skills could be enhanced by a contextualised grammar pedagogy which used grammar as a metalanguage to examine how sentence features contribute to creating meaning in texts. Do student writing outcomes improve when this approach is used in a Queensland secondary school? The current study examined the effect of using a contextualised grammar approach based on Myhill, Jones, and their colleagues' model in teaching a set of strategies to enhance secondary students' skills in writing more succinctly in expository essays.

Chapter 1 provides an overview of the study, beginning with its background (Section 1.2), context (Section 1.3) and purpose (Section 1.4). The significance and scope of the research will then be briefly discussed (Section 1.5). Definitions of terms pertinent to the research will follow (Section 1.6). The final sections will give an overview of the study's design and methodology (Section 1.7) and then outline the topics of the remaining chapters (Section 1.8).

1.2 Background to the research problem: the importance of good writing skills

Good writing skills are needed in many areas of employment and are essential for success in secondary and tertiary education, being "the primary means by which students demonstrate their knowledge" and "a gatekeeper to college entrance" (Graham & Perin, 2007b, p. 331). For example, a US study has shown that high school seniors' writing skills are closely correlated with success in first year university study (Geiser & Studley, 2002, p. 22). In addition, good writing skills are an important educational outcome because they are highly valued in the workplace, especially for white-collar workers (Graham & Perin, 2007b, p. 331). Thus, as Cremin and Myhill (2012, p. 10) point out, the ability to write well gives access to social and cultural power.

In spite of the importance of good writing skills, national testing in the US, England and Australia shows that many secondary students' levels of achievement in writing are cause for concern. Statistics from the US National Assessment of Educational Progress Report of 2011 show that 20% of Grade 8 students and 21% of Grade 12 students performed at below basic standards, while a further 54% of Grade 8s and 52% of Grade 12s performed at basic level, which "denotes partial mastery of the prerequisite knowledge and skills that are fundamental for proficient work at each grade" (National Center for Education Statistics, 2012, p. 2). In England, national tests show similar results. In 2008, the last year national writing tests were held for Key Stage 3 students, 23% of 14-year-olds performed below Level 5, which is the expected standard at Key Stage 3 (Department of Education, 2009). In Australia, national literacy testing reveals a similar situation. The National Assessment Program Literacy and Numeracy (NAPLAN) writing tests of 2013 recorded that 15.7% of Year 9 students performed below national minimum standard

and a further 20% were at national minimum standard (Australian Curriculum, Assessment and Reporting Authority, 2013, p. 205). It is clear that large numbers of secondary school students do not reach desirable minimum standards in writing skills. This must affect their access to tertiary education, proficient academic learning, and certain employment opportunities.

1.3 Context: Writing pedagogy in Australian schools

Since the 1960s, writing teachers in Anglophone countries have adopted a succession of different conceptions of writing and writing pedagogy, all of which have de-emphasised the decontextualised teaching of grammar as an aid to good writing skills. Research in the 1960s suggested that learning grammar was ineffective in improving student writing outcomes. In addition, in the 1960s and 1970s, a new model of teaching writing which conceptualised the purpose of teaching writing as promoting personal growth and creativity was widely adopted (Moon, 2012, p. 42). According to Moon (2012, p. 42), teachers using this model rejected explicit instruction of writing skills in favour of encouraging students to use a "writing process" model of shaping texts for personal and expressive meaning, fearing that explicit instruction would inhibit students' search for meaning and identity (Moon, 2012, p. 42). These two factors (lack of confidence in the usefulness of learning grammar and the introduction of the "process" model) led to at least a decrease in emphasis on (Andrews, 2005, p. 72), or, as some researchers have claimed, a complete abandonment of teaching grammar (Jones & Chen, 2012, p. 148). In the 1980s, a new conception of writing which emphasised writing as social practice became wide-spread and resulted in a new model which has been labelled the "genre model" (Moon, 2012, p. 44). While the genre model included attention to the sentence-level, the emphasis of writing instruction now changed to a greater

focus on structure and generic forms; students were explicitly taught how aspects of field (or subject matter), tenor (or roles and relationships) and mode (e.g. written, spoken, visual) combined to create the selected genres. In the 1990s, a socially critical emphasis was added. This "critical literacy" model explored how the power relations within texts were expressed (Ivanic, 2004, p. 238). In none of these conceptions of writing and the writing pedagogy that reflected them did the focus of writing instruction return to an emphasis on grammar. However, the Australian Curriculum: English syllabus (Australian Curriculum, Assessment and Reporting Authority, 2012) has introduced a language focus which represents a significant shift in the use of grammar in writing pedagogy in Australia.

The Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) is informed by a model of language derived from Halliday's (1985) Systemic Functional Grammar and genre-based pedagogy introduced by Martin (1985) and Christie (2005) (Derewianka, 2012, p. 129). The model proposed by the syllabus sees texts as socially constructed with discernible forms and language features and stages (Quinn, 2004, p. 246). It further proposes an intimate relationship between context and language use (Derewianka, 2012, p. 130). Derewianka (2012, p. 143) suggests that the Systemic Functional Grammar model underlying the syllabus lends itself naturally to a move away from the traditional decontextualised model of grammar teaching towards a more contextualised approach.

Like the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) syllabus, the genre and critical models that preceded it were text-in-context models based on Systemic Functional Grammar in which language choices at the three levels of field, tenor and mode created the meaning of

the text. Explicit teaching about how the sentence-level elements help to create the meaning was always intended as part of this model. However, writing pedagogy in Australian schools, which may be assumed to contribute to the Australian national testing outcomes quoted above in Section 1.2, has been criticised for lack of explicit attention to the relationship between context and language use, that is to say, how language makes meaning at the sentence and word levels. Derewianka and Jones (2010), for example, remark that, although most Australian teachers are familiar with the contextualised pedagogy of structure and form, they are less confident about how the text and context levels relate to the sentence grammar (2010, p. 14), and this leads to pedagogy that does not take into account the need for students to understand how the sentence-level language choices assist in creating the meaning of the text.

The pedagogy trialled and described by Myhill, Jones, and their colleagues (2012) suggests one way forward. Myhill, Jones, et al.'s (2012) model of contextualised grammar pedagogy promotes the use of grammar as a metalanguage (or language about language) to teach writing. Their 2012 study used such a model to teach early secondary school students a range of language choices as ways to express meaning in different writing contexts. This study was the first empirical study to demonstrate a link between teaching grammar and improved writing outcomes. (See Chapter 2 for further discussion of this study.) This success suggests it may be possible to use this model of contextualised grammar pedagogy to improve writing outcomes for secondary school students and to implement the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) syllabus as Derewianka (2012, p. 127) proposed: with knowledge about language at the centre of teaching about texts.

However, Myhill, Jones and Watson (2013, p. 79) found that the most effective teachers using contextualised grammar pedagogy to teach writing were those with the most secure knowledge of grammar and grammar pedagogy. They further found that to help students understand how meaning is made at the sentence level, writing teachers need both knowledge of grammar and knowledge of grammatical pedagogy, and of these, knowledge of grammatical pedagogy is the more important. These authors quote a number of studies, including recent Australian studies (e.g. Jones & Chen, 2012; Macken-Horarik, 2012), that show that many teachers' knowledge of grammar and of grammatical pedagogy is insufficient for a confident use of grammatical knowledge in teaching writing. It is possible that this lack of confidence is an important underlying cause of Australian teachers' lack of focus on teaching how meaning is made at the sentence level.

1.4 Purpose

The purpose of my study was to investigate the effect of explicit instruction in writing strategies on improving secondary students' writing style. It targets only a few of the many micro-skills at the sentence level. Competence at the sentence level is itself only one aspect of a complex performance. "The ability to produce complex sentences is probably best understood as a necessary but not sufficient condition for writing high quality texts" (Beers & Nagy, 2009, p. 187) Specifically, the study examined improvement in succinctness and syntactic complexity in expository essays following explicit instruction in particular sentence-level strategies. In addition, the study sought to explore the ways the teachers enacted the intervention and what impact this variation may have had.

Succinctness and syntactic complexity are key concepts in the study. Succinctness refers to the relative compactness of the expression of the information

in a text; a more succinct text conveys given information in fewer words than a less succinct text. Succinctness is valued in academic writing which is often written by academics, researchers and students within a defined word limit. Skills in writing succinctly enable writers to create a more detailed argument within a defined word limit, and therefore enhance their ability to communicate ideas clearly. Increased succinctness was measured in the study by tracing changes in lexical density. Lexical density is defined as the ratio of content words (e.g., nouns, lexical verbs, adjectives, adverbs) to the grammatical or functional words (e.g., pronouns, prepositions, articles) in a text (Biber, Johansson, Leech, Conrad, & Finegan, 1999, p. 62; McNamara, Crossely, & Roscoe, 2013, p. 504).

Syntactic complexity describes the complexity or familiarity of the grammatical structures within sentences. McNamara, Crossely and McCarthy (2010, p. 62) explained that syntactic complexity relates to syntactic structure in that syntax helps a reader to link underlying relationships between concepts. The use of complex syntactic structures assists writers to express how ideas are related within a sentence. While increased syntactic complexity makes a sentence more difficult for a reader to understand, McNamara et al. (2010, p. 73) found that higher syntactic complexity, measured as the mean number of words before the main verb, was a characteristic of more sophisticated writing. McNamara et al. (2010, p. 57) showed that in essays written by undergraduate students and scored by expert raters, syntactic complexity was one of three most predictive features related to ratings of quality.

My study used the Coh-Metrix computer analysis tool (McNamara, Graesser, McCarthy & Cai, 2014) which brings together indices of cohesion, language and readability as well as other linguistic computational features to calculate syntactic complexity. The Coh-Metrix program measures syntactic complexity “by calculating

the mean number of words before the main verb, the mean number of ... sentences and embedded sentence constituents, and the average number of modifiers per noun phrase" (Crossely, Weston, McLain Sullivan, & McNamara, 2011, p. 294). Two of these measures of syntactic complexity were used: left embeddedness (which is defined as the mean number of words before the main verb), and the mean number of modifiers per noun phrase. Modifiers can be pre-modifiers or post-modifiers. Pre-modifiers precede the head (or main) noun; they can be adjectives, participles or other nouns (Biber et al., 1999, p. 588). Post-modifiers follow the head noun. Post modifiers can be finite and non-finite clauses, and prepositional, adverb and adjective phrases (Biber et al., 1999, pp. 604, 605).

The following question guided the study:

- To what extent does an intervention using Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy improve secondary students' writing?

This over-arching question was operationalized by these four questions:

Research Question 1: Do lexical density, left embeddedness and the mean number of modifiers per noun phrase change from Essay 1, which is a first draft, to Essay 2, which is a polished assignment?

Research Question 2: Are these changes the same for the intervention group and the control group?

Research Question 3*:* For individual students in the intervention group, can the number of dependent clause structures used in Essay 1 be related to changes in lexical density from Essay 1 to Essay 2?

Research Question 4: Can the variations in teaching strategies across the four classes be related to changes discussed in Research Questions 1 and 2?

1.5 Significance and scope of the study

To date there has been little research on the effect of contextualised grammar pedagogy on student writing outcomes (Myhill, 2010, p. 134), in fact, little research at all on effective sentence-level pedagogy. Graham and Perin's (2007a) meta-analysis of writing pedagogy for adolescent students lists twelve main pedagogic approaches which have been shown empirically to make a difference to writing outcomes; of these, only one, sentence combining, is at the sentence level. The current study may contribute to research in the area of sentence-level teaching approaches for adolescent students, using an approach based on Myhill, Jones et al.'s (2012) conception of a contextualised grammar approach. This is a teaching approach that uses grammar as a meta-language to explain how meaning is made in texts at the sentence level. The approach is explained more fully in Section 2.4. Its focus on teaching strategies to enhance student skills in the area of writing clearly and succinctly in expository essays is an area that Myhill, Jones, et al. (2012) have not explored. Investigating a contextualised grammar approach to teaching writing in the lower secondary school may enhance understanding of ways to improve writing pedagogy for adolescent students.

1.6 Important Definitions

This section provides definitions of key concepts used throughout this document.

"A **clause** is a unit that is structured around a verb phrase. The lexical verb in the verb phrase characteristically denotes an action ... or a state. ... The verb phrase is

accompanied by one or more elements which denote the participants involved in the action, state, etc., ... the attendant circumstances, ... the attitude of the speaker/ writer of the message, the relationship of the clause to the surrounding structures etc." (Biber et al., 1999, p. 120).

A clause can be either a **main** or **dependent clause** depending on its function. "An embedded clause is called a dependent clause. The super-ordinate clause, in which it is embedded, is termed the main clause. ... Main clauses which are not part of any larger syntactic structure are referred to as independent clauses" (Biber et al., 1999, p. 192).

Contextualised grammar pedagogy is an approach to teaching writing in which grammar is used as a metalanguage (or language about language) to discuss how particular grammatical features contribute to making meaning in a sentence or text. Grammar is taught in the context of writing lessons, to improve students' writing (Myhill, Jones, et al., 2012 p. 141).

The notion of **genre** is concerned with how a text is organized to achieve its social purpose (Christie & Derewianka, 2008, pp 6, 7). Texts that share the same social purpose tend to share the same language features and are classified as belonging to the same genre. The language and organization within a genre reflect choices at the three levels of field, tenor and mode, which in turn reflect the social purpose of the text. While genres are relatively stable in their characteristics, they can change over time and context. (Graham, Gillespie, & Mc Keown, 2013, p. 5).

Grammatical metaphor is the expression of meaning through a lexico-grammatical form that originally evolved to express a different type of meaning

(Thompson, 2004, p. 223), for example the use of a noun for a process that could be expressed as a verb (Halliday, 1985, p. 95).

Lexical density is a measure of succinctness in a text. Succinct expression of ideas conveys information without unnecessary words; a more succinct text conveys information in fewer words than a less succinct text. Lexical density is calculated by finding "the proportion of a text made up of lexical word tokens (nouns, lexical verbs, adjectives, and adverbs)" (Biber et al., 1999, p. 62).

A **noun phrase** is a syntactic structure which consists of a noun or pronoun as head, either alone or accompanied by determiners and modifiers, for example, *their expensive house* where *their* is a determiner and *expensive* is a modifier (Biber et al., 1999, p. 97). An **extended noun phrase** has more than one modifier.

Phrases are units of language which can be either single words or a group of words. The identity of phrases can be shown by substitution and movement tests, for example, by substituting a single word for a group of words without destroying the overall meaning (Biber et al., 1999, p. 94).

Register refers to different ways to speaking and writing, for example, formal or colloquial language. The concept of register refers to the combination of grammatical resources which create the field (the subject matter), the tenor (the people involved and their relationship), and the mode (written, spoken or visual) of a text as it achieves its particular purpose (Humphrey, Love, & Droga, 2011, p. 6; Thompson, 2004, p. 40).

The **sentence-level developmental continuum of writing development** is a theoretical concept that proposes that, at the sentence level, development as a writer is marked by identifiable changes in syntax usage and that within different age

groups of students, more or less skilled writers can be distinguished linguistically. In the study, studies by Myhill (2008), Loban (1975) and Hunt (1965, 1970) into the progression of adolescents' writing skills were used as the basis for understanding this process.

Syntactic complexity refers to the complexity of the syntax or grammatical structures used in a text and is relative rather than absolute. More syntactically complex sentences are longer and contain more embedded clauses than less syntactically complex sentences. Syntactic complexity may be measured by assessing words per clause and clauses per T-unit (Beers & Nagy, 2009, p. 185). The T-unit is defined as "the minimal terminable unit", that is "one main clause plus any subordinate clause or non-clausal structure that is attached to or embedded in it" (Hunt, 1970, p. 4). The Coh-Metrix program measures syntactic complexity "by calculating the mean number of words before the main verb, the mean number of ... sentences and embedded sentence constituents, and the average number of modifiers per noun phrase" (Crossely, et al., 2011, p. 294).

1.7 Design and Methodology

The study used a mixed methods design in order to gain an understanding of teaching approaches in four classrooms and the subsequent learning outcomes as evidenced in changes across student texts. The design included quasi-experimental (Creswell, 2012, pp. 309, 310) and interpretivist (Orlikowski & Baroudi, 1991, p. 13) approaches.

The quasi-experimental section compared changes in student texts across intervention and control classes in pre- and post- intervention texts. This methodology allowed a comparison to be made between learning outcomes for

students who experienced a contextualised grammar approach in learning some sentence-level writing strategies and students who experienced different teaching approaches. The interpretivist section of the study analysed scripts of teacher interviews. These interviews were semi-structured in order to allow teachers to report on what they believed were important aspects of their teaching approaches in teaching an English unit of work. The scripts were then analysed thematically according to protocols suggested by Braun and Clarke (2006).

1.8 Thesis Outline

This chapter has introduced the nature and purpose of the study and provided an overview of its main elements. Chapter Two will examine the theories of language that underlie the study; studies concerning the sentence-level writing development of adolescents and theories generated by these; pedagogical approaches in this area; and the link between the extended noun phrase and the expository essay genre. The chapter will conclude with an explanation of how the research discussed relates to the study. Chapter Three will detail the research design and methodology, the participants in the study, how data were collected and analysed, and outline the procedures used to analyse the data. Chapter Four will present the quantitative analysis. Chapter Five will present the qualitative analysis and possible connections between this analysis and the analysis presented in Chapter Four. Chapter Six will present a discussion of the results, implications and limitations of the study, followed by reflections on directions for future research.

Chapter 2: Literature Review

2.1 Introduction

This chapter reviews a selection of theoretical and empirical studies relevant to teaching approaches designed to assist adolescent students to develop their writing skills at the sentence level in the expository essay genre. Section 2.2 begins with a brief explanation of Halliday's (Halliday, 1985, 1994) theory of language, which underlies the study. This section also includes an explanation of the concepts of *genre* and *register*. Discussion of key aspects of the expository essay genre, including the importance of *grammatical metaphor* and the extended noun phrase follows. Both Halliday's Systemic Functional Grammar (1985) and the genre theory that is derived from it provide powerful theoretical understanding for the choice of strategies and teaching strategies for the intervention. The chapter will then examine studies concerning the writing development of adolescents at the sentence level (Section 2.3). Understanding how students develop as skilled writers can inform writing pedagogy in enabling teachers to "intervene more strategically to support writers at different stages of competence" (Myhill, 2008, p. 286). A discussion of contextualised grammar pedagogy follows in Section 2.4. Section 2.5 describes links between the extended noun phrase, academic writing and adolescent writing development. The chapter continues with Section 2.6, a summary and discussion of the implications of the literature review for the study and concludes with a brief overview of the chapters to follow.

2.2 Halliday's Systemic Functional Grammar

Halliday's Systemic Functional Grammar is a theory of grammar that posits that grammar is a resource for making meaning (Halliday & Mattiessen, 2013, p. 49).

Unlike other functional grammars such as that proposed by Biber and his colleagues (Biber et al., 1999), Halliday's is not a reference grammar, but is rather one designed to be used to analyse text (Halliday & Mattiessen, 2013, p. 57). Halliday's text analysis examines three levels: field, tenor and mode, combinations of which determine the different uses of language. Here, field relates the language to the nature of the social and semiotic activity, or more simply, the subject matter; tenor relates the language use to the roles and relationships being played out in the social domain and the values with which the people involved in the communication imbue the domain; and mode relates the language to what role is being played by the language or semiotic system within the whole situation, and the channel of communication being used (Halliday & Mattiessen, 2013, pp. 33, 34). Thus, Halliday's functional grammar focuses on the relationships between texts and their cultural contexts and investigates how the choices language users make from the language system are both constrained by and act upon the social context of the communication (Christie & Derewianka, 2008, p. 4).

2.2.1 The concepts of genre and register

Genre and register are two related concepts derived from Halliday's Systemic Functional Grammar. Genre links social purpose and text organization. Martin (2009) described how he elaborated on Halliday's functional model

> by adding on a level of genre, whose job it was to coordinate resources, to specify just how a given culture organizes this meaning potential into recurrent configurations of meaning, and phases meaning through stages in each genre. ... The high-level position of genre in the model provided a way of talking holistically about the social purpose of texts and the ways in which different

> genres marshalled different resources to achieve their goals. (Martin, 2009, p. 12)

Thus, the notion of genre is concerned with how a text is organized to achieve its social purpose (Christie & Derewianka, 2008, pp. 6,7). Texts that share the same social purpose tend to share the same language features and are classified as belonging to the same genre. The language and organization within a genre reflect choices at the three levels of field, tenor and mode, which in turn reflect the social purpose of the text. While genres are "typified ways of interacting which become stabilized structures" (Graham et al., 2013, p. 5), they are continually evolving to reflect new social purposes and subject matter.

Register refers to the functional variation of language, that is, how language reflects the function it is being made to serve (Halliday, 1985, p. 44). The combination of field, tenor and mode shape the register as the text achieves its particular purpose (Humphrey et al., 2011, pp. 5, 6). Since writing in a particular genre depends on adopting an appropriate register, successful writers must understand how to select appropriate grammatical structures and vocabulary in order to produce the genre (Schleppegrell, 1998, p. 185).

2.2.2 Expository essay genre

The expository essay genre is an important academic genre for students, because its use as an academic and assessment genre is ubiquitous (Berman & Nir-Sagiv, 2004, p. 340; Chandrasegaran, 2013, p. 101; Schneer, 2014, p. 619).

> As students leave high school, ... production of an expository essay, with its expectations that points will be made in a well-marked hierarchical structure,

> with explicit links between the thesis and supporting point, becomes a mark of school success. (Schleppegrell, 2001, p. 434)

The social purpose of the expository essay is usually to persuade the reader to a point of view by appealing either to reason or to emotion (Humphrey et al., 2011, p. 12). Its generic form follows from this purpose. The essay must use a thesis which is defended by evidence and commentary; the writer should create an authoritative, knowledgeable tone (Schleppegrell, 2001, p. 435). The generic structure includes an introduction which previews the arguments to follow, body paragraphs in which the topic sentence identifies the topic of the paragraph followed by examples and elaboration, and a concluding paragraph (Humphrey et al., 2011, p. 12; Schneer, 2014, p. 621).

Since the social purpose of the expository essay is to present an argument supported by evidence, a skilled performance depends on the writer's ability to present information clearly and succinctly. A key mechanism for this process is the use of grammatical metaphor (Humphrey et al., 2011, p. 64). Grammatical metaphor is the expression of meaning through a lexico-grammatical form that originally evolved to express a different type of meaning (Thompson, 2004, p. 223), for example the use of a noun for a process that could be expressed as a verb (Halliday, 1985, p. 95). By condensing clauses into phrases, use of grammatical metaphor makes a text more lexically dense and "typically result[s] in technical vocabulary that indicates the taxonomic relationships of particular academic subject areas" (Schleppegrell, 2001, p. 450). Grammatical metaphor "enables the development of argumentation, providing resources for the accumulation, compacting, foregrounding and backgrounding of information and evidence so that the argument can move forward" (Christie & Derewianka, 2008, p. 25).While grammatical metaphor is just

one aspect of the expository essay genre, its function in helping to compact and present complex ideas (Humphrey et al., 2011, p. 152) means that its use is central to creating the register required.

A further consideration in the genre characteristics of the expository essay is to consider its links to academic language. As explained above, the expository essay is a key academic genre. Biber and Gray's (2010) corpus analysis showed that academic writing is characteristically compressed and uses phrases rather than dependent clauses to present information (2010, p. 11). They pointed out that both clarity and conciseness are goals of academic writing (2010, p. 19). Biber and Gray's functional model linked these characteristics to the field (or social context) of academic language: It is written for readers who are expected to be expert readers and who need to read an ever-increasing load of text efficiently (2010, p. 11). Academic prose has a heavy information load as well as the need to present argumentation and evaluation, and uses extended noun phrases extensively to manage these goals (Biber et al., 1999, pp. 62, 579). The findings of Biber and his colleagues' (1999) analysis support the theoretical position that Halliday and Mattiessen (2013) presented about the links between purpose, context and text. The social purpose of academic writing is to convey information clearly and succinctly, and the sentence grammar is key to creating a clear but lexically dense text.

Consideration of the concept of syntactic complexity is a further way to extend understanding of academic language and the expository essay genre. Syntactic complexity refers to the complexity of the grammatical structures within a sentence. While a syntactically complex sentence is not invariably a good sentence, syntactic complexity can be a measure of overall sophistication of language usage. McNamara et al. (2014) suggest that more syntactically complex sentences are usually longer

and contain more complex and unfamiliar syntactic structures than syntactically simpler sentences (McNamara et al., 2014, p. 85). Significantly, McNamara et al. (2010) state that "whereas complex syntax ... may result in text that is difficult to process, it may also be reflective of more sophisticated, skilled language production" (McNamara et al., 2010, p. 63). Increasing syntactic complexity can be an element of increasing maturity as a writer. As discussed in Section 2.3 below, Myhill (2008), Hunt (1970) and Loban (1976) found that as people develop skills as mature, sophisticated writers, they are able to use increasingly complex syntactic structures.

There is some further empirical evidence for the proposal that use of more complex syntax is a factor in the production of a better quality expository essay. Two studies, Beers and Nagy (2009) and McNamara et al. (2010), link measures of syntactic complexity to assessments of quality in expository essays.

Beers and Nagy (2009) examined aspects of the sentence structures of 43 expository essays written by Years 7 and 8 students who were paid volunteers from suburban schools in Northwest USA. These students dictated essays to a scribe for up to ten minutes in a laboratory setting. The essays were rated holistically on a four point scale by two middle school teachers. Participants' writing ability on standardized tests was calculated at an average of the 48th percentile, making the group slightly below average. The study found that syntactic complexity (measured as words per clause) was positively correlated with teacher assessments of quality (2009, p. 196). While this is an interesting finding, the small cohort of volunteers and the unusual mode of text production limit the generalizability of the conclusion. A cautious comparison should be made between the conclusions of this study and those carried out with writing produced in a school setting.

The second study, McNamara et al. (2010), was a larger, corpus-based study and used the Coh-Metrix tool to analyse 120 untimed essays written in response to a SAT-style prompt by undergraduates at Mississippi State University. This is an essay written in the style of the standardized testing regime for college entrance in the USA; the prompt, or set question, is usually a topic of general knowledge with which students from all social backgrounds would be familiar. The essays of the study were holistically assessed on a six-point scale by university writing tutors using a standardised rubric. The study found that syntactic complexity (measured as mean number of words before the main verb) was one of three most predictive features for quality in the essays (McNamara et al., 2010, p. 73). This is a larger study, and the context of the study means that the study is focussed on the kind of academic language required in undergraduate studies, for which the younger students in my study are being prepared.

2.3 Theories of adolescent writing development

Teachers want not only to teach students to write well in important genres, but also to promote students' development as writers. Development as a writer is a complex process influenced by many factors. Graham et al. (2013) proposed that, while writing development is not completely understood, it is shaped by a combination of contextual, cognitive and motivational factors. Contextual factors operate at classroom, cultural, institutional and society levels. Cognitive and motivational factors operate primarily at the individual level but are influenced by cultural and social factors. Graham and his colleagues (2013) proposed that advances in the writing novice's strategic behaviours, motivations, knowledge and skills propel development as writers from novice to competent (Graham et al., 2013, p. 4). Christie and Derewianka (2008) agreed. They suggested that the process is

influenced by “nature via nurture” (2008, p. 213). Humphreys et al. (2011) defined development as increasing control of all three metafunctions, field, tenor and mode, to enable the construction of increasingly sophisticated texts (2011, p. 149). Writing is a learned skill (Cremin & Myhill, 2012, p. 10). Its development does not take place naturally, like speaking, but is always learned in an educational setting of some kind (Halliday, 1985, p. vii; Humphrey et al., 2011, p. 7).

Development at the sentence level, while a necessary component of overall growth in skill as a writer, cannot be divorced from whole-text level development. Halliday’s model of language proposes that combinations of field, tenor and mode determine register (Halliday & Mattiessen, 2013, p. 13). Thus, while syntax choices can be the subject of analysis, this analysis must occur within a whole-text context. Myhill (2008) expressed a similar view. Having identified key syntactic markers of development for lower secondary students, Myhill insisted that students’ design ability is a key marker of overall development: As students increase their writing skills, they increase their skills in matching their language usage with audience and purpose (Myhill, 2008, p. 285).

2.3.1 Adolescent writing development at the sentence level

Sentence-level development occurs within the whole-text context and is just one factor among many that contribute to development as a writer. Dating at least from the 1920s, researchers have examined the development of syntactic structures in children and adolescents’ writing (Applebee, 2000, p. 97), at times looking for a linear developmental path such as has been identified in children’s physical development. While the majority of these studies focused on younger children’s writing development, some studies examined adolescents’ writing development. In the twentieth century, two notable researchers, Hunt (1965, 1970) and Loban (1976),

published work of lasting importance. The work of these researchers supported the view that development involves use of increasingly complex syntax and that increasing use of extended noun phrases is one marker of development for adolescent writers.

Hunt's (1965) study was seeking "the developmental trends in the frequency of various grammatical structures written by students of average IQ" (Hunt, 1965, p. 1) in Years 4, 8 and 12. This study examined 1000 words written in class by 54 students from Florida State University School, where Hunt notes he had trouble finding students whose IQ tested below average, suggesting that his participants were middle-class students mostly from higher socio-educational backgrounds. He concluded that average children use most syntactic structures from fourth grade (Hunt, 1965, p. 156) and therefore there was no need to consider teaching syntax in any particular order. However, he added that, compared to less mature writers, more skilled writers used "structures of considerable depth and complexity" (Hunt, 1965, p. 157).

Hunt's later, larger study (1970) probed this aspect of development. In this study, Hunt's 250 participants were selected from 1,000 Tallahassee public school students to give a random selection of students across a normal distribution of IQ levels. This time he examined texts written in one class period by students in Grades 4,6, 8, 10 and 12, and later compared these results to texts written by two groups of adults, one skilled and one average. All participants were Caucasian. He found that as age and skill increased, writers wrote significantly longer clauses, and that more skilled writers wrote longer clauses than their less skilled age peers. Significantly, he found the mechanism for the lengthening of clauses was the extension of noun phrases (Hunt, 1970, p. 25). Thus the study indicates that, at the sentence level, the

path of development is not, (as Hunt had sought in his 1965 study), in learning syntactic forms in a particular order, but rather the ability to use a larger number and a greater variety of structures together in any one sentence. This larger study covered a more comprehensive selection of participants socio-educationally, but in excluding African-American students, clearly did not cover the whole range. However, the larger number of participants and the wider age range lend credibility to his analysis of what is a learned sequence. While educational and other social practices have no doubt changed during the last forty-five years, the demands of written academic language may not have changed a great deal, making the conclusions of the study still worth consideration in 2015 in the absence of contrary evidence produced since that time.

Like Hunt's studies, Loban's (1976) longitudinal study tracing oral and written language development of 211 students from kindergarten to Grade 12 is regarded as seminal. Loban's study used a representative cross-section of children entering kindergarten within the public school system of Oakland, California in 1953, intending his study to be representative of the urban population of a typical American city in twentieth century USA. His conclusions about writing development in the secondary school years, like Hunt's, could be dated by evolving language mores, but have not been contradicted by any later study so far identified. One of the aspects of syntactic development that Loban considered was the use of dependent clauses. Loban (1976) found that, in Years 9 to 11, more able students, having used more clauses than their less able peers through Years 4 to 8, now began to use fewer dependent clauses, and to use a larger repertoire of syntactic structures. Less able writers of this age used more dependent clauses through Years 9 to 11. Loban remarked "low groups [i.e. less able writers] used dependent clauses excessively in

high school" (Loban, 1976, p. 68). This over-use of clauses makes student texts less succinct and less formal than skilled performance of the expository essay register requires.

Three more recent studies shed further light on adolescent writing development in the area of the noun phrase. The first is Myhill's (2008) study which was a large-scale study involving 718 UK students in Years 8 and 10, a representative sample of this age group of school students. Their texts were marked against UK national criteria and classified good, average and weak for each grade (Myhill, 2009, p. 8). Myhill's purpose was to identify characteristics that distinguished skilled and less skilled writers at the two age levels. Her analysis of the patterns of linguistic structures used, based on Quirke's (Quirke, Greenbaum, Leech, & Svartvik, 1985) grammar (Myhill, 2008, p. 275), enabled her to define a developmental continuum from weak to good writers for lower secondary students. (Quirke uses traditional grammar terms for his descriptive grammar. Myhill follows his usage.) Myhill maintained that the developmental path was from unskilled to skilled, rather than age–related (Myhill, 2008, p. 274). She reported "there are syntactical structures whose appearance appears to be related to development" (Myhill, 2008, p. 286). Among her statistically significant findings is that while writers in Years 4 to 7 use more subordinate (or dependent) clauses, in the secondary years, as the quality of the writing improves, writers use fewer clauses (Myhill, 2008, p. 279), as Loban's (1976, p. 68) analysis had also shown. In addition, poorer writers use shorter noun phrases than their more skilled peers (Myhill, 2009). Myhill emphasised that, although the patterns of syntactic development exist, they exist alongside students' growth in the ability to shape texts to suit audience and purpose and that growth in both areas constitutes writing development for adolescents (Myhill, 2008, p. 271). This is based

on her theoretical stance that writing is a social practice determined by and influenced by social, cultural and historical context, "a meaning-making activity, rooted in social contexts, and reflecting power relations between different groups" (Myhill, 2005, p. 84). The size and empirical methodology of this study lend credence to the findings; the age group of the participants match the participants of my study; although the students are English, the similarity of the Australian and English educational cultures makes the findings noteworthy in the absence of a comparable study carried out in Australia.

The second study, Ravid and Berman's (2010) study showed that as young writers develop, their noun phrases increase in complexity. Their study considered the noun phrase structure in both Hebrew and English using 48 participants who were native speakers from US "well-established schools" (2010, p. 8) in the English part of the study. The students, then, represent a middle-class group of language users, are not representative of the whole cohort of adolescents, and are not exactly comparable to the samples in the studies so far cited. Adolescents from this socioeconomic background would be more advanced on average than the whole cohort (Loban, 1976, p. 85); however, this does not negate the findings of the study, as discussed below. This linguistic study of syntactic acquisition involved students in four age groups (Years 4-5; Years 7-8; Years 11-12, and university students aged between 20 and 30). It revealed "a clear and consistent developmental increment in NP [noun phrase] complexity" from Year 4 to Year 7, and particularly from Year 11; this trend was most marked in expository texts (Ravid & Berman, 2010, p. 3).

In the third study of interest regarding the noun phrase, Crossley, Weston, McLain Sullivan and McNamara (2011) arrived at a similar conclusion to Ravid and Berman (2010) using different means. These researchers used the automated

computer tool Coh-Metrix to examine a corpus of approximately 200 essays written by students in Years 9 and 11 from US suburban schools and first-year university students from Mississippi State University. Like Ravid and Berman's participants, these participants are not a representative sample of all students, since urban students are excluded. Crossley et al. (2011) examined whether writing styles change in predictable ways as writers develop proficiency. At the sentence level, one of their findings was that the ninth-grade students wrote the shortest extended noun phrases, while essays written by first-year university students contained the longest extended noun phrases. This study agrees with those already cited in identifying the lengthening of the noun phrase as a marker of development. "As writers advance, they produce noun phrases that consist of more words" (Crossely et al., 2011, p. 302). Both this study and Ravid and Berman (2010) are USA studies. As for the Myhill (2008) study, in the absence of comparable Australian studies, this evidence for the use of the extended noun phrase as a marker of development in a similar English-speaking culture is the best available.

Thus, three recent studies using medium to large-scale groups of participants agreed on an essential point for the study: that increased use of the extended noun phrase is a marker of development for adolescent writers. The earlier studies cited identified similar findings. One possible reservation might be the selection of less-than-fully-representative samples of students in two of the studies. Socio-economic class is known to be a factor in language proficiency. Loban (1976, p. 85), for example, concluded that his study showed a clear correlation between socio-economic class and language proficiency. That two of the more recent studies have used participants who are plainly middle-class students (Ravid & Berman, 2010), or would reasonably be expected to be skewed towards middle-class students (Crossley

et al., 2011) does not seriously affect the conclusions of the studies. Relatively privileged backgrounds would place these students at a more advanced place on the developmental continuum than might otherwise have occurred for a fully representative population, but this does not necessarily alter the course of development. A further consideration is that the participants in the current study shared this privileged background, as students of a private school where parental socio-educational backgrounds are predominantly in the upper half of the population, as described in Chapter 3.

The major studies in the area of the developmental continuum of maturing writers quoted above are all UK and USA studies. Given that writing is a learned skill, the question arises as to how far the conclusions of these studies may be applied in the Australian context, since the education systems, while similar, are not identical. The one Australian study in this area so far identified is Christie and Derewianka (2008). This study has described a developmental sequence for student writing covering the primary and secondary school years. It is based on examination of a corpus of approximately 2,000 texts chosen from a survey of studies undertaken by the authors over the twenty years preceding the publication, as well as exemplary texts from the New South Wales Higher School Certificate examinations and projects of research students. Within this corpus, an undefined number of representative texts assessed as good by teachers and examiners were chosen as benchmarks of what is possible at each age. The authors acknowledge that many students do not meet these levels of development. Thus the study has a different aim from the aims of the studies above, and does not attempt to represent typical development as writers. However, it is interesting to note that the general developmental trajectory that

Christie and Derewianka describe within a Systemic Functional Grammar framework does not appear to contradict the studies quoted above.

2.4 Contextualised Grammar Pedagogy

If increased usage of the extended noun phrase is a sentence-level marker of writing development, how can teachers enhance secondary students' skills in this area? As Andrews' (2005) metastudy showed, teaching grammar separately from writing has not been shown to be an effective pedagogy for improving writing. However, a contextualised grammar approach to writing pedagogy is recommended by a number of respected scholars and is the model suggested by the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) (Derewianka, 2012, p. 129). Contextualised grammar pedagogy is an approach to teaching writing in which grammar is used as a metalanguage to discuss how particular grammatical features contribute to making meaning in a sentence or text. Grammar is taught in the context of writing lessons, to improve students' writing (Myhill, Jones, et al., 2012 p. 141). "The teaching focus [is] on effects and constructing meanings, not on the grammatical terminology: building on the concept of writing as design" (Myhill, Jones, et al., 2012, p. 148). The concept of contextualised grammar pedagogy is used by both Systemic Functional Linguists such as Derewianka and scholars such as Myhill, Jones et al. (2012, who use traditional grammar terms.

As discussed above, according to Halliday's Systemic Functional Model of language, grammar is a resource for making meaning (Halliday & Mattiessen, 2013, p. 49). The goal of a teaching approach using grammar as a metalanguage in teaching writing is to help students understand how language makes meaning in texts. Contextualised grammar pedagogy shows students explicitly how the three levels

(field, tenor and mode) that make up register (Martin, 2009, p. 12) are created by language choices, and thus how the students may use the resources of language to create meaning. “Discussing the relation of lexis, grammar, and discourse structure to genre is inescapable—since the lower level resources have to be brought to consciousness and taught” (Martin, 2009, p. 16). Myhill and Watson (2014) expressed a similar view. They proposed that “fostering young writers’ awareness of the linguistic choices available to them in writing and how those choices differently shape meaning is developing their metalinguistic knowledge of writing” (Myhill & Watson, 2014, p. 54).

“Teaching grammar and knowledge about language in positive, contextualised ways which make clear links with writing is not yet an established way of teaching and it is, as yet, hugely under-researched” (Myhill, 2005, p. 81). However, one study has shown that a contextualised grammar pedagogical approach can improve student writing outcomes. This groundbreaking UK study was carried out by Myhill, Jones, et al. (2012). In this study, Myhill, Jones, et al. used traditional grammar terminology within a functional (but not Systemic Functional Linguistics) grammar framework. A randomised controlled trial was used to test a pedagogical approach in which teachers used contextualised grammar in teaching writing skills. The intervention rested on work units supplied by the researchers in which grammar was embedded “where a meaningful connection could be made between the grammar point and writing” (Myhill, Jones, et al., 2012, p. 146). The teaching focus was on improving writing, not teaching grammatical terminology (Myhill, Jones, et al., 2012, p. 148). Myhill, Jones et al.’s model of contextualised grammar pedagogy included a number of related strategies; it went beyond simply using grammar terms to discuss sentence-level aspects of texts. The guiding principles of this approach were that grammatical

terms were used as a metalanguage to discuss how the language was working to make meaning and create particular effects where a link could reasonably be made between the grammar and the writing point. The metalanguage was always used with examples and patterns. Explicit links were drawn between the grammatical feature and its potential for enhancing writing. Lessons included opportunities for discussion and the use of models for students to play with the language and then use in their own writing. Only authentic texts were used. In this way, students were encouraged to see linguistic choices as resources for making meaning or ways of creating effects in their writing (Myhill, Lines, et al., 2012, p. 31).

The study showed that students who experienced the approach made significantly greater gains over an academic year than students who had experienced writing pedagogy that did not include grammar (Myhill, Jones, et al., 2012, p. 153). This was the first large-scale study to show such an effect (Myhill, Jones, et al., 2012, p. 153). Myhill and Watson (2014, p. 53) maintained that using grammar as a metalanguage to discuss how texts make meaning improves learners' understanding of how grammatical choices are significant in shaping meaning in texts. The large scale and randomised controlled trial methodology used make Myhill, Jones et al.'s conclusions convincing for the given context of England and its schools. Applicability to Australian schools is not completely clear-cut, but it could be argued that the similarity of the language and educational cultures of the two countries suggests that it is an approach worthy of further investigation in an Australian context.

The study by Myhill, Jones, et al. (2012) lent weight to the arguments of scholars such as Derewianka (2012), Derewianka and Jones (2010), Humphrey et al. (2011) and Schleppegrell (2001) who advocate the use of a similar model of

contextualised grammar pedagogy derived from Systemic Functional Grammar to show students how language works in texts, in an effort to improve their writing skills. Derewianka and Jones (2010, p. 12), for example, note that teachers using a Systemic Functional Grammar framework usually teach the language features of a focus genre within the context of curriculum activities that involve students using language for a communicative purpose. Language relevant to the task including appropriate syntax is typically taught explicitly at certain points in the curriculum cycle. In addition, these writers advocate the use of the key stages of analysis of an authentic text in the proposed genre including explicit discussion of genre features using grammar as a metalanguage, followed by joint construction of a model text, and then independent construction of the target text. Humphrey et al. (2011, p. 7) in advocating this model, pointed out that using grammar as a metalanguage allows teachers to be explicit about how the language functions when modelling or jointly constructing texts with students. In spite of these advocates, however, there is still little empirical evidence of effective use of grammar to produce writing development (Derewianka, 2012, p. 144). This model has similar aspects to Myhill, Jones et al.'s (2012) model in the use of grammar as a metalanguage for explicit instruction at the sentence level, but does not specifically include aspects such as the use of discussion and play, and the emphasis on writing as design.

A contextualised grammar approach can be used with functional or traditional grammar terms; both systems provide a shared metalanguage to express ideas about the texts discussed. In the UK study, Myhill, Jones, et al. (2012) used traditional grammar terms. In the Australian context, Exley and Mills (2012) suggested using "the innovative weaving of traditional and functional grammar" (2012, p. 195) used by the Australian Curriculum: English (Australian Curriculum, Assessment and

Reporting Authority, 2012) syllabus. This interweaving combines traditional grammar terms like *verb* and *clause* for naming aspects of syntax with a complementary functional approach to discussing cultural and social dimensions of texts (Exley & Mills, 2012, p. 194). Similarly, Derewianka and Jones (2010, p. 15) suggested that the combination of traditional and functional grammar terminology allows for building on traditional grammar but taking a step further to link the syntax to the purpose and audience of the text. Explicitly linking the sentence-level features to the social purpose and conventions of the genre assists students to understand how an appropriate register is created, thus fostering the metalinguistic understanding to transfer the learning to other contexts.

2.5 Links between the extended noun phrase, academic writing and adolescent writing development

In their corpus-based grammar, Biber et al. (1999) describe complex noun phrases with extensive modification as "typical of academic prose, where a majority of all noun phrases have some modifier" (Biber et al., 1999, p. 579). They add that, "much of the new information presented in academic texts is packaged as modifiers in noun phrases, resulting in a very high density of information" (Biber et al., 1999, p. 579). Two other studies also make this link. Biber and Gray's (2010) study of a corpus of 3 million words of academic prose across four general academic disciplines showed conclusively that academic writing relies on extended noun phrases rather than dependent clauses (2010, p. 3) as a way to convey information succinctly. The size and range of the corpus and Biber and Gray's methodology which combined computer and hand-coded analysis tend to support their conclusions. Fang, Schleppegrell and Cox (2006) found the use of embedded clauses and other means of expanding noun phrases "characteristic of the registers of advanced literacy" (Fang et al., 2006, p. 253). These researchers presented a

Systemic Functional Grammar analysis of a range of school-based texts and showed that using the extended noun phrase is a strategy that enables writers to include a lot of information into a short syntactic structure. Furthermore, use of noun phrases can contribute to cohesion, and therefore to clarity, by creating a clear chain of reasoning through distilling a series of clauses into one nominal element (Fang et al., 2006, p. 254). Both of these strategies contribute to the creation of a succinct text.

Myhill (2009) found that more skilled writers at Years 8 and 10 write longer noun phrases than their less skilled peers. As discussed in Section 2.2, Beers and Nagy's (2009) study agreed. This latter study found a link between the use of the extended noun phrase and the quality of academic texts written in the expository genre. Beers and Nagy's small study showed that words per T-unit positively correlated with teachers' assessments of quality for essays written by students in Years 7 and 8. The T-unit is defined as "the minimal terminable unit", that is "one main clause plus any subordinate clause or non-clausal structure that is attached to or embedded in it" (Hunt, 1970, p. 4). As Hunt pointed out, the mechanism for lengthening the T-unit is use of the extended noun phrase (Hunt, 1970, p. 25), so what Beers and Nagy's study showed is that in the expository essay genre, the longer the extended noun phrase, the better the quality of the essay for Years 7 and 8 students.

2.6 Summary and implications

Halliday's Systemic Functional Grammar (1985, 1994) provides a model for explaining the links between social context and purpose, subject matter and values, and language choices. The concepts of genre and register derived from Systemic Functional Grammar are also powerful tools of analysis for understanding the links between text features and purposes. As Martin (2009) and Schleppegrell (2001) point

out, using these tools of analysis can help teachers identify and, by explicit teaching, make students aware of how the word and sentence level resources make meaning and create suitable register in specific genres.

That competence in the expository essay genre is a pre-requisite for academic success in secondary school and beyond makes mastery of the genre a most important goal of these years of schooling. Effective pedagogy in this genre is thus an important goal for teachers. Greater understanding of the sentence-level features of the expository essay can assist teachers to focus their teaching to ensure all students achieve competence. Two sentence-level features of the genre, the extended noun phrase and the use of grammatical metaphor, are important to establishing the register required and to presenting argument effectively and succinctly. Of these, the extension of the noun phrase has been established as a marker of development in the adolescent years.

Myhill's (2008) developmental continuum of writing at the sentence level suggests that moving from using more clauses to fewer clauses and more extended noun phrases is an indicator of increased writing skill which occurs in the early adolescent years. Myhill (2008) found evidence of this transition in her skilled Years 8 and 10 writers. Ravid and Berman's (2010) study found evidence of this change at Year 11 (2010, p. 12), suggesting that by Year 11, the more skilled student writers are developing competence in using more phrases and fewer clauses. Loban (1976) found that his more skilled writers developed in this aspect of syntax significantly between Years 9 and 11. These findings, taken together, suggest that most Year 9 writers would be just beginning to move towards skilled use of this syntactic feature; the more skilled Year 9 writers may be already beginning to show some competent use of this syntax.

These are powerful reasons to investigate if explicit instruction in strategies designed to assist students to increase their usage of these syntactic features will result in more polished and succinct writing and therefore contribute to longer-term development as writers. Understanding more about such a model of teaching may contribute to addressing the underperformance in writing skills of so many secondary school students, as attested by the national testing results quoted in Chapter 1. In addition, it may help teachers to understand how to promote the developments in writing skills that take place slowly during the years of secondary schooling.

The study by Myhill, Jones, et al. (2012) showed that a contextualized grammar approach could enhance adolescent writing skills. A similar contextualised grammar approach is also strongly advised by experts such as Derewianka and Jones (2010), Schleppegrell (2001), Derewianka (2012) and Humphrey et al. (2011). Investigation of the effect of a teaching approach that focuses more on the sentence level as part of an approach closer to the spirit of the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) syllabus may add to understanding about how better to encourage teachers to bring this level to their students' attention more fully and explicitly. It may also extend Myhill, Jones, et al.'s (2012) findings about their model of contextualized grammar pedagogy which did not consider the area of the extended noun phrase, grammatical metaphor, or the expository essay.

To date, except for sentence-combining pedagogies (Applebee, 2000, p. 98), there has been little research on pedagogical approaches that might enhance development of sentence-level skills (Myhill, 2010, p. 134) and no study so far identified has used Myhill's continuum of linguistic development to "intervene more strategically to support writers at different stages of competence" (Myhill, 2008, p.

286). The proposed study sought to add to understanding in these currently under-researched areas.

This chapter has presented a review of relevant literature relating to aspects of writing skills of lower secondary students. It included discussion of genre and register with particular focus on the expository essay genre. Links between an important aspect of the syntax of the expository essay, the extended noun phrase, and adolescent writing development were explored, followed by discussion of two similar teaching approaches, contextualised grammar pedagogy, as described by Myhill, Jones et al. (2012), and the pedagogy linked to a Systemic Functional Grammar approach. Chapter 3 will discuss the research design, participants, procedures, timeline, analysis, how ethical considerations were managed and the limitations of the study. Chapter 4 will present the quantitative data. Chapter 5 will present the qualitative data and an analysis of how the qualitative and quantitative data are linked. Chapter 6 will present the conclusions of the study.

Chapter 3: Research Design

3.1 Introduction

This chapter describes the research design adopted to probe the effectiveness of using a contextualised grammar approach to teach strategies designed to assist Year 9 students to increase succinctness in expository essays. The chapter will begin by describing the research design and methodology (Section 3.2). This will be followed by the research questions (Section 3.3), details of the participants (Section 3.4), intervention procedures (Section 3.5), data sets (Section 3.6), data preparation (Section 3.7), methods of data analysis (Section 3.8) and ethical considerations and limitations of the study (Section 3.9).

3.2 Research Design and Methodology

The study used a mixed-methods design. The methodology combined a quasi-experimental intervention and an interpretivist approach. The choice of mixed-methods design suits the research questions (Onwuegbuzie & Leech, 2005, p. 377) in allowing the consideration of teacher reports about different teaching approaches along with changes in student texts.

The quasi-experimental portion of the study used textual and statistical analysis to probe the effectiveness of an intervention designed to enhance students' writing skills, specifically, to assist Year 9 English students to write expository essays more succinctly. The study has a narrow focus on syntax. It makes no claim that syntax is any more than one feature of many of skilled writing. Specific textual measures in essays written six weeks apart were compared in order to trace changes to student syntaxover an English unit of work. The study used control and intervention groups in order to make a comparison of student writing outcomes with and without the

intervention. This comparison was intended to extend understanding of the effect of the intervention. In the context of a secondary school, no random assignment to control and intervention groups was possible. However, the school situation was such that several comparable class groups were undertaking the same unit of work. This meant that comparisons could be made across control and intervention groups.

The interpretivist portion of the study examined teacher interview scripts and other school-based documents to identify themes about the teaching approaches used in the classes whose texts were examined in order to understand possible links between teaching approaches and changes in student texts. Teacher's teaching approaches were uncontrolled extraneous variables in the quasi-experimental section of the study, and so this interpretivist approach gave an opportunity to further probe the complex factors underlying changes in student texts. A semi-structured interview protocol was adopted in order to allow participants to report on their teaching approaches without undue leading by the interviewer while not denying the possibility of choosing the focus of the interview and using follow-up questions as the interviews proceeded. The participants were confident, articulate and experts in the field discussed and this means that there is a strong likelihood that the data accurately reflect important aspects of the teachers' teaching approaches (Creswell, 2012, p. 218).

3.3 Research Questions

The overarching purpose of the study was to examine the effect of using Myhill, Jones et al.'s (2012) model of a contextualised grammar approach to teach Year 9 English students to write more succinctly in expository essays. In order to do this, changes to specific aspects of student texts (namely, lexical density, left embeddedness, and the mean number of modifiers per noun phrase) were examined.

These changes were then related to teacher reports of their teaching approaches taken during the unit. In addition, in the intervention classes, links between students' change in lexical density and the students' usage of dependent clauses in the first essay were sought. The following question guided the study.

- To what extent does an intervention using Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy improve secondary students' writing?

This question was operationalized by these research questions:

Research Question 1: Do lexical density, left embeddedness, and the mean number of modifiers per noun phrase change from Essay 1, which is a first draft, to Essay 2, which is a polished assignment?

Research Question 2: Are these changes the same for the intervention group and the control group?

Research Question 3: For individual students in the intervention group, can the number of dependent clause structures used in Essay 1 be related to changes in lexical density from Essay 1 to Essay 2?

Research Question 4: Can the variations in teaching strategies across the four classes be related to changes discussed in Research Questions 1 and 2?

3.4 Participants

Participants in the study were the teachers and students of four Year 9 English classes at a private school in Brisbane, Australia. The school draws its students from the more privileged sections of society. According to the Australian Government My School website (www.myschool.edu.au), in 2013 74% of students came from families in the top quartile of the Index of Socio-educational Advantage, and 93% of

students were from families in the upper 50% of this index. The 2013 NAPLAN[2] results reflect the students' privileged socio-educational background, with 74% of Year 9 students scoring in the top three bands for writing (www.myschool.edu.au), a result which is comparable with other similar schools but above-average for the whole population.

The teachers were colleagues of the researcher, who is an English teacher at the school involved. All four teachers volunteered to assist the researcher by taking part in the study. They were all experienced teachers who are respected as highly competent specialist secondary school English teachers. All had at least ten years' teaching experience, and had been teachers at this school for at least three years. The teachers were thus highly skilled and very familiar with the goals and materials of the novel unit being studied, all having taught it previously.

Since the study was embedded in the English class schedule in Term 3, 2014, student participants were selected by convenience sampling as the Year 9 English students of the four teachers. The classes were comparable for academic achievement. The school operates three streams of English classes; these classes were all from the middle stream. Students in these classes were considered average English students for this school, but the NAPLAN results suggest that they were above average writers in the total population of Year 9 students in Australia. All the same, there was a range of writing ability amongst the students, some of whom were regarded by their teachers as needing a lot of support to write the assignment at a competent level. A further reason for choosing these Year 9 students was that inspection of texts written by students of these classes in Term Two 2014 suggested

[2] National Assessment Program Literacy and Numeracy (Australian Curriculum and Reporting Authority)

that they were at a level of sentence-level writing development suitable for learning the strategies.

The student participants were 60 of the 98 students in the four classes. All students in the four classes were invited to participate but a combination of circumstances resulted in 60 meeting the conditions of participation which were having submitted an essay written in class and an assignment, and having agreed to participate in the study via a signed consent form submitted to the students' English teacher. Of these, the major reason for non-participation was non- submission of the consent form. To attempt to understand any possible effect of this on the study, an analysis of the assignment marks for students who participated and those who did not participate was undertaken. The assignments were marked by the four class teachers and then, to improve comparability across the classes, a selection of each class's assignments was cross-marked by other Year 9 English teachers. This method does not make the marks absolutely comparable, but does give some confidence that a level of comparability has been achieved.

The assumption underlying the comparison of the assignment marks is that the assignment mark gives some indication of the relative strength of the writer, so that it is possible to speculate at least on how representative of the whole cohort of 98 students the 60 participants were. It is acknowledged, however, that the marks are holistic, and are by no means more than a very general guide to the students' syntactic skills. The use of these figures, then, is quite speculative. For example, a common assumption by an experienced English teacher would be that the more able writers, being often the more engaged students, are more likely than the less successful students, who are usually the less able writers, to submit a form to their English teacher. This assumption proved wrong in this case. An examination of the

assignment marks of the students who participated against all the students in the classes showed that students whose assignments were marked at A or B were more likely not to have become participants in the study. Further, comparison by intervention and control classes showed that, for students whose assignments were marked at A and B, 14% of students in the intervention classes (Classes A /I and B /I) did not participate in the study, while 8% of students in the control classes (Classes C /C and D /C) did not participate. Eight percent of students whose assignments were marked at C and D did not participate, and this percentage was the same for both intervention and control classes. While acknowledging the complex mixture of factors that underlie the assignment mark, a tentative conclusion may be drawn here that the data could be skewed towards the control classes representing a more able cohort than the intervention classes. These data were used only to examine how comparable the intervention and control classes were; they did not form any part of the assessment of the intervention. See Table 3.1 for these data.

Table 3.1 Comparison of intervention and control classes by assignment mark

Assignment marks for Essay 2	A	B	C	D	Total
Number of students in control classes gaining this Essay 2 mark	14	20	12	1	47
Number of participants in the study gaining this mark, control classes	10	16	5	0	31
% of total student cohort (98 students) lost to study, control classes	4	4	7	1	
Number of students in intervention classes gaining this Essay 2 mark	6	32	12	1	51
Number of participants in the study gaining this mark, intervention classes	5	19	4	1	29
% of total student cohort (98 students) lost to study, intervention classes	1	13	8	0	

3.5 Procedure

The starting point for the procedure of this study was the choice of a writing genre and an appropriate year level for data collection. As explained in Chapter 2, teaching the strategies of grammatical metaphor (as nominalisation), sentence combining and changing dependent clauses to extended noun phrases to create a more succinct text is most appropriately carried out as part of teaching the expository essay genre because of the importance of succinctness and the use of the extended noun phrase in this genre. As also noted in that chapter, a skilled mature performance in this genre must use extended noun phrases to present information and argument clearly and succinctly. These considerations led to the decision to seek an opportunity within an existing unit of work where the focus genre would be an expository essay. Because writers use different sentence structures depending on what genre they are writing (Beers & Nagy, 2009, p. 198), choice of the same genre for the pre- and post-intervention essays avoided changes in syntax use which are due solely to writing in different genres.

A further consideration in the selection of class groups and year level was the match between the strategies and students' writing development. As explained in Chapter 2, on average, developing writers begin to decrease the number of dependent clauses in favour of using more extended noun phrases in early to mid-adolescence, with command of this type of syntax continuing to develop into the undergraduate years and beyond. The researcher's examination of texts written by Year 9 students (13- to 14-year-olds) at the school in question ascertained that the more able writers in the mainstream English classes were just beginning to use fewer dependent clauses and more extended noun phrases. The less able writers were using mainly dependent clauses and compound sentences in their first draft writing. Using

Myhill's (2008) continuum as a guide, this suggested that Year 9 mainstream English classes in this school would be a suitable choice to trial the strategy of changing dependent clauses to phrases because the more able students appeared to be in the early stages of this transition and the less able writers should have been soon to begin it. As the Year 9 Mainstream English work plan for 2014 set down a suitable unit to begin in Term 3, the plan to trial the strategies suited to improving performance in the expository essay was discussed with colleagues who were teaching a class at this level, four of whom volunteered to assist by taking part in the study.

The next stage of the process was to discuss possible teaching strategies and materials with the two teachers who would teach the new strategies. Based on this discussion, materials including changing dependent clauses to phrases, sentence combining and nominalisation exercises, model essays and a guide to Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy were prepared by the researcher. (See Appendix B for these materials.)

3.6 Intervention

The intervention followed Myhill Jones et al.'s (2012) model of contextualised grammar pedagogy, using grammar terms as a metalanguage to help students understand how meaning is made at the sentence level. While traditional grammar terminology was used, other aspects of the pedagogy followed the usual Queensland secondary school model based on Systemic Functional Linguistics concepts such as genre, as recommended in the ACARA: English syllabus. Thus, it was expected that the teachers would begin with a discussion of the audience and purpose of the expository essay form. Then they would deconstruct models of the expository essay to guide the students to understand how succinctness helped to create a suitable register for the essay and assisted the presentation of a detailed argument supported

by evidence. This contextualisation has been a routine practice in Queensland secondary English classrooms since the early 1990s, having been introduced in the 1988 English syllabus. Following this contextualisation, the intervention teachers would explicitly teach students the intervention strategies to achieve succinctness: nominalisation, and replacing dependent clauses by extended noun phrases. For nominalisation, teachers were recommended to teach their students to identify the verb in a sentence, to change this verb to a noun, and then to reshape the sentence. It was recommended that this strategy be applied especially when combining two sentences. Nominalisation was then to be extended by reviewing the concepts of phrases and clauses, and having students practise identifying dependent clauses. Having clarified these structures, it was recommended that students would practise changing some dependent clauses to noun and participial phrases, and noticing how this can decrease the number of words needed to express an idea. It was envisaged that discussion of examples using these strategies would also include a discussion of eliminating repetition and combining sentences, as opportunities for using these already-familiar latter strategies arose.

The teachers were specifically asked to use Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy and were briefed and given written guides to this teaching approach. These guidelines, given in full in Appendix B, include always using the grammar terms as a metalanguage, but supporting students by consistently accompanying the metalanguage with examples and models to imitate. Myhill, Jones et al. (2012) further recommended that teachers include discussion and playful activities which encourage students to experiment with language in their approach. Included in the teachers' materials were exercises to practise identifying dependent clauses and noun phrases and to apply the succinctness strategies, and it was

expected that teachers would use these as they judged necessary. The materials were supplied to the two teachers of the intervention classes. In addition, the researcher briefed the teachers orally and invited them to ask for any necessary clarification.

Because teachers routinely adapt strategies they learn about according to their professional judgement about what suits the students they are teaching, the teachers were invited to use the materials or adapt them as they wished. Here my rationale was that this was the typical innovation adoption practice I had observed teachers using throughout my teaching experience. The intervention teachers were asked to teach the strategies using the key ideas of Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy as set out in the materials supplied. This flexible application of the intervention used the same implementation strategy as that used by Myhill, Jones et al. (2012), who implemented their intervention via teaching/learning materials supplied to teachers. Jones, Myhill and Bailey (2013, p. 10), in describing this study in a different publication, reported that teachers were allowed to adapt materials to suit the needs of their students, but were asked to apply the teaching methods as closely as possible. They noted that "intervention fidelity is highly problematic in naturalistic educational settings" and that "it was neither possible nor ethical to attempt to achieve identical implementation (2013, p. 10).

The teaching/learning materials supplied to the teachers used traditional grammar terms. The rationale behind this choice was pragmatic. In line with the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) curriculum that the school was using, the teachers and students were already using these terms. To have asked teachers to use, for example, the Systemic Functional Grammar terms, would have needed time to teach a new system of grammar and its terminology. This time was simply not available. In addition, the

intervention did not depend on the use of any particular grammar. Myhill, Jones and their colleagues (2012) used traditional grammar terms; Schleppegrell (2001) and Humphrey, Love et al. (2011) promoted the use of Systemic Functional Grammar in order to show students how meaning is made at the sentence level. Both systems, and other possible grammars, can be used contextually to teach writing. Furthermore, as mentioned above, the strategies were designed to be robust and to be adaptable by teachers who made their own choices about how to implement new strategies according to their judgements about what was best for the students they were teaching.

When the unit began, all four teachers had their classes write an expository essay which became Essay 1. Each teacher chose a topic that their students would find to contain familiar subject matter. Three of the classes wrote to a teacher-set thesis concerning a film the classes had recently studied, while the fourth class wrote an essay on the novel they were currently studying. This first essay was written in a supervised class setting to ensure comparable conditions of time and assistance across the participants. The students were given a few days' notice of the thesis and the genre of the essay, and produced the essay in approximately one hour of class time. Paragraph topics were suggested, and in some classes students were supplied with examples of suitable quotations to include. These essays were written using word processors and submitted to class teachers electronically. Response to these essays was supplied by the researcher (an experienced secondary English teacher) who gave students feedback on points of subject matter, sentence and paragraph structures, and vocabulary choices. There was no special focus on succinctness in this feedback. These essays were used by the teachers to establish the students' current knowledge of the expository essay, and to guide instruction in the essay form

that the students were revisiting after a semester-long break from writing in this genre. Their purpose in the study was to measure the existing writing skills of students across the four classes in order to be able to calculate change in the syntactic measures between Essay 1 and Essay 2.

As teaching in the unit proceeded, classes studied a set novel in the usual way. In all classes, a focus of the later weeks of the unit was to improve students' performance in writing an expository essay, which was the assignment for the unit. All students were set the same assignment, which became Essay 2 in the study. All the students studied the same novel and were set the same question to discuss. (See Appendix D for a copy of the task sheet all the students used.) It was during this time of focus on developing essay writing skills that the two intervention teachers taught the strategies of nominalisation, sentence combining and changing dependent clauses to extended noun phrases as ways of improving succinctness in essays. The reason for the choice of Essay 2 written in assignment conditions rather than as a timed essay parallel to Essay 1 conditions was the expectation that students would not acquire the strategies to the point of automatic usage in the short time available in the unit. To be able to apply the strategies consciously in a re-drafting process represents progress towards full acquisition, and it was progress to this level that the study sought to examine.

Precautions were put in place in planning the intervention to avoid the threat to validity posed by the possibility of the intervention generating a treatment effect (Creswell, 2012, p. 305). The primary precaution was to take steps to avoid use of the targeted strategies in the control classes. Although it was possible that, independent of any introduction by the researcher, the strategies may have been taught to the control classes, they were new to this school culture at Year 9 level, and

so this unplanned strategy teaching was judged unlikely. To avoid advertising the details of the strategies, the intervention teachers were briefed out of earshot of any other teachers, and asked not to discuss the details of the intervention with colleagues until after the students had submitted Essay 2. In addition, steps were taken to avoid alerting students to how their texts were to be evaluated in the study to avoid this knowledge affecting their performance on Essay 2. General statements of purpose were used on the consent forms. Teachers did not reveal to students how the study would evaluate their Essay 2. Students were not told that the strategies that they were learning were the subject of the study. Students experienced the intervention strategies simply as some of the variety of learning experiences that they were used to encountering in their classrooms within a school culture where routinely, different teachers teach the same English unit to different classes in different ways.

3.6 Data sets

There were two data sets for the study: the student essay texts and the teacher interview scripts and other school-based materials. Two essays were collected. Essay 1 was the one-draft essay students wrote in class at the beginning of the unit. Essay 2 was the students' assignment submitted at the end of the unit. Students submitted print copies of their assignments to their teachers, and the assignments were marked by their teachers in the usual way. The students also submitted electronic copies of the assignment to their teachers, who passed them on after the consent forms had been submitted. The second data set consisted of interviews with the teachers and other school-based materials. Each teacher was interviewed once after the teaching unit was finished. Two teachers were interviewed in a quiet room at the school (Creswell, 2012, p. 221), and the third teacher was interviewed at the researcher's home. In all cases, the venues and times of interview were chosen by the teachers.

The three face-to-face interviews were between twenty and fifty-five minutes long and were digitally audio-recorded (Creswell, 2012, p. 221) and transcribed by the researcher. The fourth interview was submitted by email. This format was chosen by the participant after he had postponed two scheduled interviews; it allowed the teacher to present a considered version of what he considered the key teaching approaches he had used in the unit.

Recommendations by Carspecken (2013), Tracy (2013) and Simons (2009) guided the approach to the interview process. Before the interviews took place, an interview protocol comprising open-ended questions to probe the teachers' teaching strategies was constructed (Carspecken, 2013, p. 156). The questions focused on the teachers' writing teaching strategies in the unit. (See Appendix A for examples of the prepared questions.) Open questions were designed to encourage teachers to elaborate and to avoid any "leading" by the interviewer so that the data reflected the perceptions of the teachers as accurately and fully as possible. Thus, for example, the interview with Anita began with an open question that invited her to relate how she had implemented the intervention. Maintaining eye contact and using non-committal prompts such as *umm* encouraged the participants to continue *(*Carspecken, 2013, p. 159; Simons, 2009, p.10). In addition, participants were invited to expand on certain points (Carspecken, 2013, p. 160; Simons, 2009, p. 10). In response to what the participants revealed, in some places, low-inference paraphrasing designed to encourage the teachers to elaborate was used, flexibly following leads away from the prepared questions as unexpected directions in the conversation arose (Carspecken, 2013, p. 159; Creswell, 2012, p. 221; Tracy, 2013, p 139). Furthermore, some questions probed for evaluation indirectly (Creswell, 2012, p. 221). The researcher debriefed the first interview transcript with a peer in order to receive feedback on the

quality of questioning and possible instances of leading questions that may have detracted from the validity of the data (Carspecken, 2013, p. 166). In addition, all transcripts were checked by the interviewees, who confirmed that they were accurate records of the interviews.

3.7 Data preparation

The student texts were analysed using the automated textual assessment tool Coh-Metrix which "has been shown to be an informative and reliable text analysis tool in a number of prior studies" (Varner, Roscoe, & McNamara, 2013, p. 42). Access to Coh-Metrix was obtained via the internet. The use of the Coh-Metrix tool to analyse aspects of the essays meant that these texts had to be prepared in order to optimise the accuracy of the analysis. This preparation is referred to as "cleaning" (McNamara et al., 2014, p. 155). As McNamara and her colleagues explain, texts for analysis need to be made optimally machine readable. This is achieved by removing any aspects of the texts that might "undermine the analysis offered by Coh-Metrix" (McNamara et al., 2014, p. 155). These authors caution that "the default condition of the text is exactly how you find it" (McNamara et al., 2014, p. 156) and that any changes made should be consistent across the corpus being analysed. These guidelines were followed in the preparation of these texts for processing.

The purpose of using Coh-Metrix in this study was to analyse the students' sentence structures. Therefore, any changes that were made were chosen to enable the machine analysis to do this as accurately as possible. To this end, aspects that were not full sentences such as students' names, titles, sub-headings and bibliographies were removed from all the texts. Incorrectly used vocabulary was not changed, since vocabulary per se is not an aspect of sentence structure. McNamara and her colleagues mention that student "bizarre spelling" and "odd line breaks" in

student work should be corrected (McNamara et al., 2014, p. 155) and this advice was followed. Where students used digits rather than writing the word for a number, the digits were changed to words. For example, *22* in the text became *twenty-two*. There were no dates used in the essays. These were minor changes.

Punctuation mistakes represented the biggest challenge for the machine reading of sentences and it was in this area that the most important changes were made to student texts. Punctuation mistakes were corrected to reveal implied sentence structures. Students' ability to punctuate correctly is an important writing skill, but was irrelevant to the current study. The program uses punctuation to interpret sentence beginnings and endings, and so changes were made where a simple correction would result in a grammatical sentence. For example, punctuation mistakes were corrected where a correction such as changing a comma to a full stop resulted in two sentences the program could read in place of a grammatically incorrect sentence. There were instances where the sense of the student's text suggested that a comma had been used in place of a semi-colon rather than a full stop. Here the distinction is between writing two simple sentences or a compound sentence containing two independent clauses closely related in meaning. This correction was always a judgement call, and in doubtful cases the default was to use a full stop and create shorter and simpler sentences. Other common punctuation errors which were corrected were those involving apostrophes such as possessive apostrophes, or contractions, for example, where the student had written *its* in place of *it's* and vice versa. (These are really errors in spelling conventions.) Apart from these punctuation changes, ungrammatical sentences or sentence fragments were not changed.

The student texts contained quotations from the novel being analysed, and this was the cause of the second major change made to the texts. A full sentence quoted from the novel is not the student's sentence, and so, when the quotation was a full sentence, it was deleted from the cleaned text. Many quotations were less than complete sentences and were embedded into the students' sentences. Where this occurred, it was considered that the student had had to use his or her knowledge of sentence grammar to produce the sentence, even though all the words were not his or her own. Therefore, quotations that used less than a complete sentence from the novel and were incorporated into a student's own sentence structure were not changed. Where a quotation had been incorporated into the student's sentence structure and continued into a further complete sentence quoted from the novel, the second (complete) sentence was removed for consistency of treatment across all the essays. Quotation marks as punctuation of quotations from the novel were removed from all the texts; for analysis of the sentence structure, it is not important that parts of the sentences are quoted from the novel. Quotation marks that denoted direct speech were not deleted. Page numbers which the students had used to document their quotations were removed.

A further consideration in the preparation of the texts was that one of the control classes was offered a model introduction of two paragraphs that they were encouraged to rewrite, but could use complete. This introduction had been written by the class teacher. Some students did use this introduction more or less verbatim; clearly, the sentences it contained were not written by the students. It could not be included in the analysis of students' sentence structures and needed to be deleted. To maintain comparability across the classes, the introductory paragraph (no other student wrote two introductory paragraphs) of the second essay was deleted from all

the second essays. The task instructions included a direction that the first body paragraph should discuss a particular incident in the novel. (A copy of the task sheet is supplied in Appendix D.) This subject matter was used as a check to determine where the student's introductory paragraph/s ended. There were no essays where this was unclear.

The Coh-Metrix analysis tool produces text analyses on 106 different measures. The data produced by six of the measures were selected from the total as being relevant to the study. These measures were numbers 67, SYNLE, 68, SYNNP, 82 WRDNOUN, 83 WRDVERB, 84 WRDADJ and 84 WRDADV.

Measures 67, SYNLE, left embeddedness (the mean number of words before the verb in the main clause) and 68, SYNNP, (the mean number of modifiers per noun phrase) are both measures of syntactic complexity. Tracking increased levels of syntactic complexity in student texts is a way to monitor their expanding repertoires of syntax, and this gives an indication of the syntactic element of their progress as writers. Furthermore, the strategies taught in the intervention were designed to increase students' skills in producing syntactically complex sentences. As students use fewer dependent clauses and more extended noun phrases, their texts should increase in syntactic complexity, especially in the measure *mean number of modifiers per noun phrase*.

Measures 82 WRDNOUN, 83 WRDVERB, 84 WRDADJ and 84 WRDADV calculate incidence per 1000 words of noun, lexical verb, adjective and adverb usage. These measures were summed to calculate lexical density, since lexical density is the ratio of content words (namely, nouns, lexical verbs, adjectives, and adverbs) to grammatical or functional words (e.g., prepositions, articles, pronouns) (Christie & Derewianka, 2008, p. 26; McNamara et al., 2013, p. 504). Lexical density measures

succinctness and was used to investigate whether the students' use of the strategies had a traceable effect on succinctness in their texts.

Data concerning the number of dependent clauses used by the intervention students in Essay 1 were also produced. The researcher used *Longman Grammar of Spoken and Written English* (Biber et al., 1999) definitions of the three types of dependent clauses (noun, adverbial and adjectival). The researcher read each essay and analysed the sentences, using a tally sheet. The numbers of simple sentences (containing only a main clause, with no dependent clauses), co-ordinate clauses (two or more main clauses joined by conjunctions or semi-colons), adjectival, adverbial and noun clauses were noted on the tally sheet. From this, the total number of dependent clauses was calculated by adding the tally for adjectival, adverbial and noun clauses. While only the dependent clauses were used in the analysis, defining each clause was used as a checking mechanism to ensure no valid dependent clause was missed.

This tallying of dependent clauses used the essays exactly as the students wrote them, although some punctuation mistakes were ignored in analysing the dependent clause structures. The pertinent punctuation errors involved how students marked sentence endings. Here, the most common error was for students to use a comma where a full stop was required. A complicating factor in dealing with this error was the possibility that the student had used a comma in place of a semi-colon, intending to write a compound sentence. Where the possibility of this arose, the researcher was guided by the sense of the sentence in deciding if there were two simple sentences or one compound sentence. As in the Coh-Metrix cleaning process detailed above, the default judgement in doubtful cases was for two simple sentences. Where quotations were used in these essays, the same rule was adopted as

for the Coh-Metrix cleaning: whole sentences were not counted as the student's sentences, and so were not included in the tally; where quotations had been included in the student's sentence structure, they were regarded as a part of the student's sentence and included in the tally.

3.8 Methods of data analysis

The first stage of analysis compared means for lexical density, left embeddedness and the mean number of modifiers per noun phrase in pre- and post-intervention texts. The second stage was to compare these measures across control and intervention classes. The third stage was to carry out a regression analysis to examine possible links between the number of dependent clauses in the first essay and change in lexical density. The final stage of analysis was a thematic analysis of the interview data. These stages corresponded to the four research questions that operationalized the question that guided the study. This section will discuss how these analyses link to the purposes of the study.

Research Question 1: Do lexical density, left embeddedness, and the mean number of modifiers per noun phrase change from Essay 1, which is a first draft, to Essay 2, which is a polished assignment?

This question was designed to probe if these measures changed systematically between a first draft essay and a polished assignment under the writing conditions typical of lower secondary schools. No previous studies using Coh-Metrix measures to investigate this question for secondary students texts were identified and so this was a preliminary probe in using Coh-Metrix analysis in this way.

For Research Question 1, a Repeated Measures ANOVA was carried out to determine if the changes to these measures between Essay 1 and Essay 2 were

random variations or whether the different writing situations of a timed first draft and an untimed polished assignment were likely to be responsible for the different results.

Research Question 2: Are these changes the same for the intervention group and the control group?

This question was designed to investigate whether teaching the intervention strategies made a statistically significant difference that could be identified in the student texts. A statistically significant difference between intervention and control classes would suggest that teaching the strategies had been an effective way to help students write more succinctly or with greater syntactic complexity.

The design used texts written under different conditions of a timed and supervised draft and an untimed assignment. This made it impossible to ensure that the second essays, the assignments, were completely the students' work. It is known that students can access a range of assistance in writing an assignment: parents, siblings and tutors have been known to help students polish their texts. This contingency was managed by the use of the control classes. Students in both groups had the same opportunity and motivation to access assistance to polish their essays so that the assumption was made that both groups had received an equal amount of assistance.

Repeated Measures ANOVAs (or Analysis of Variance, an overall measure of whether group means differ) (Field, Miles et al., 2012) were carried out to compare changes in lexical density and syntactic complexity across the two essays by the two groups, intervention and control groups. The purpose of these ANOVAs was to test if a statistically significant difference existed between the texts written by the intervention and control groups. Comparing change in the measures across the two

essays rather than the raw scores of Essay 2 was designed to control for possible differences in levels of writing skills across the control and intervention groups.

Research Question 3: For individual students in the intervention group, can the number of dependent clause structures used in Essay 1 be related to changes in lexical density from Essay 1 to Essay 2?

This question probed whether the students' stage of sentence-level development affected the students' application of the strategies. As explained in Chapter 1, Section 1.6, dependent clauses are clauses that are embedded in sentences and cannot stand alone as sentences, for example, adverbial and adjectival clauses. This third question sought to probe the suitability of the intervention for students at different stages of sentence-level writing development, that is, whether the intervention was well timed for students at their current stage of sentence-level development, or if an earlier or a later time would have been more appropriate. As explained in Chapter 2, the developmental continuum proposes that writers first develop usage of a range of dependent clauses before beginning to use fewer dependent clauses and more extended noun phrases. In their 2012 study that used similar contextualised grammar pedagogy to that of the current study, Myhill and her colleagues found that the most able writers benefited the most and the least able benefitted the least from their intervention. In their discussion of the results, these authors suggested that the aspects of writing addressed in their intervention may not have been well-matched with the specific writing needs of less able writers in the study (Myhill, Jones, et al., 2012, p. 152).

In the current study, less able writers were identified by their usage of a larger number of dependent clauses than their more skilled peers (Myhill, 2008, p. 279). Because the lengths of the essays varied, this measure was calculated as incidence

per 300 words rather than as an absolute measure. The less skilled writers were identified as those students using a higher incidence level for dependent clauses than the more skilled writers (Myhill, 2008, p. 279). The relationship of this criterion and greater lexical density in the final text was designed to shed light on how closely the intervention met the needs of all students in the study.

A correlation study was chosen in order to investigate if any association could be established between the level of writing skill and students' application of the strategies to create a more succinct text. The number of students in the intervention classes (29) was adequate for the use of this statistic (Creswell, 2012, p. 355). A Pearson correlation analysis of both the pre- and post-intervention texts was carried out to assess the suitability of the intervention across skills levels. The analysis examined the variables and their coefficients for evidence of a link between the incidence of dependent clauses used in the initial texts and the change in lexical density.

Research Question 4: Can the variations in teaching strategies across the four classes be related to changes discussed in Research Questions 1 and 2?

This question used a qualitative approach to gain a more complete understanding of different teaching approaches the teachers used. Teaching/learning situations are complex and multifaceted, and "resist simplistic causal explanations between pedagogical activity and learning outcome" (Myhill, Jones, et al., 2012, p. 144). A thematic analysis of this data set was carried out guided by protocols set out by Braun and Clarke (2006).

Braun and Clarke (2006) suggest that a starting point to a thematic analysis is to relate explicitly assumptions about what the data represent. I believe that these data represent versions of the teaching approaches taken that have been reflected

through various lenses. These lenses include the teachers' perceptions of their identities as expert teachers in a school where academic achievement is competitively pursued; their perception of my change in identity from a teacher to a researcher; their understanding of the goals of my research; and our existing co-operative and collegial relationships. Thus, the data cannot be considered the simple and complete truth about the teaching approaches; it represents what the teachers recalled sometime after teaching these lessons among many lessons in a busy schedule of teaching, and what their individual regard for the maintenance of the appearance of conformity to the norms of teaching within this school's English department allowed them to reveal. Much here is unknowable or goes beyond what the study investigated. In addition, silences may exist in the data where information or attitudes that the teachers may have regarded as too obvious to discuss with the researcher, (a colleague who had shared the school culture for a number of years) do not appear in the interviews (Tracy, 2013, p. 236).

Braun and Clarke (2006, p. 87) suggest that a thematic analysis of data begins with familiarisation with the data. I familiarised myself with the interview data by a process of immersion which included listening to the recorded interviews, producing transcripts of three of them (the fourth was an email), checking the transcripts against the recordings, and reading and re-reading the transcripts. The accuracy of the transcripts was checked by the interviewees to whom I sent transcripts for checking. None of the teachers had any concern regarding the accuracy of the transcription and no-one requested that I delete any section, although I had explained that I was willing to do this.

The next step suggested by Braun and Clarke (2006, p 88) is to generate an initial set of codes. This is an interpretative action and begins the analysis (Tracy,

2013, p. 184). Saldana (2011, p. 104) suggests that the descriptive codes help to categorise the data and should summarize the topic of the datum. I read and re-read the transcripts and coded them manually by highlighting sections and making notes on the texts. Initially, I used descriptive codes (Tracy, 2013, p. 186), approaching this task using the framework of Research Question 4. I was looking for information regarding how teachers taught the writing section of the unit and the problems they mentioned they had encountered.

Braun and Clarke characterise the next process as the search for themes, which involves conceptualising patterns of apparent and underlying meanings within the data (2006, p. 82; Saldana, 2011, p. 108). Following Braun and Clarke (2006, p 82) I made judgements that a number of themes captured something important in the data in relation to the research question. Having noted that teachers discussed how they taught different parts of the expository essay genre such as overall essay structure, or with-in paragraph structure, I decided to structure my discussion of the data around these categories. These became sub-themes which were then organised into two themes in the final analysis: teaching strategies above the sentence level, and teaching strategies at the sentence level. Two further themes were identified as important to the descriptions of teaching approaches: the teachers' evaluation of the intervention strategies, since this was a focus of the study, and lack of time as an issue that had driven teaching decisions. I am an experienced English teacher, and my experience in teaching students how to write the expository essay no doubt influenced my analysis of the teachers' approaches. For example, familiarity with genre theory may have influenced my partitioning of some of the data using genre theory concepts. In the final part of this section of the analysis process, I created

tables of key excerpts from the data for each teacher and for each of the four major themes.

My analysis was carried out at the descriptive rather than the interpretative level (Braun and Clarke, 2006, p. 84), working on the assumption that the data were a reasonably reliable representation of what had occurred. I justified this assumption by a number of factors. First, the existing collegial relationship between the teachers and me; second, the plausibility of the accounts, although the conformity depicted with the teaching culture within the English department of this school may have been exaggerated; and third, the acknowledged expertise of the teachers in the area being discussed.

The next stage of the process defined by Braun and Clarke (2006, p. 91) is to review and refine the themes. Their advice is that data within the themes should cohere meaningfully and there should be clear identifiable distinctions between themes. I now re-read the entire data and the tables of excerpts to check that the themes worked to include all important information regarding how teachers taught the writing section of the unit. I organized my analysis by synthesising some themes and discarding some initial categories that I found to be not really useful due to lack of coverage by more than one teacher (Tracy, 2013, p. 194). I then drew up the final table of themes and the explanations of what each theme sought to capture. Finally, I wrote the report found in Chapter 5 in which I attempted to provide a logical account of the data using exemplars to exemplify my key arguments regarding the links between the interview and the text analysis data (Tracy, 2013, p. 207).

3.9 Ethics and Limitations

Ethical considerations are important, especially as the study involved students who are minors and the reputation of a school. Following Creswell's (2012, p. 24)

guidelines for ethical research, steps were taken to protect the identities of the participants. The school and individual students are not named in the research report. Any quotations used were assigned pseudonyms (Creswell, 2012, p. 553). Creswell (2012, p. 24) advises to gain access through all levels of gatekeepers. Consent to carry out the study was obtained from the school principal and the English Head of Department. Every effort was made to obtain fully informed consent from the participants (Creswell, 2012, p. 24). All teachers involved signed consent forms that set out their roles and the purpose and procedures of the study. Students and their parents were asked to give written consent following receipt of a document outlining the study, its purpose, what the students were asked to do, and how the study results would be published. The texts of students who did not provide written consent for inclusion in the study were not used; these students still received the same teacher feedback on their first texts as the other students. Consent forms were preserved as part of the documentation of the study.

The study was designed to minimise any disruption to routine teaching/learning procedures so that students would not be disadvantaged by taking part in the study (Creswell, 2012, p. 24). For example, the two essays that were studied were always part of planned teaching/learning and assessment activities for the students concerned.

Presentation of the new strategies was delayed but not denied to the control classes (Creswell, 2012, p. 321). Following the study, the teaching approach, the strategies and their purpose were shared with all interested English teachers at the school for use with the whole body of students. The delay in this presentation allowed for the feedback from the first trial to be incorporated in the second presentation to a wider group of students so that the control group teachers were able

to take advantage of what was learned to fine-tune their teaching approaches. These procedures ensured that all individual participants were treated with equity and they, and the school community as a whole, gained something from the study (Creswell, 2012, p. 24).

The generalizability of the findings is limited. The quasi-experimental methodology, the small number of participants and the convenience selection of participants all limit the generalizability of the findings. In addition, although the participants are the perceived average students of the school, the socio-educational backgrounds of the students were from a narrower range than for the whole population of their age peers.

The existing relationship of the researcher with the teachers and the school involved presented potentially positive and negative effects. The researcher had been employed at the school for six years and had developed personal and professional relationships with the teachers in the study. While the existing relationship made for trust between the researcher and the participants, this relationship could also have affected the comprehensiveness of the data collected in that, as colleagues, both researcher and participants were motivated to maintain a co-operative professional relationship. This may have led us to avoid any appearance of open disagreement by omitting opinions or information judged unhelpful. In addition, conscious or unconscious choices to represent oneself as professional and expert may have made for silences in the discussion of pedagogy where it may have seemed unorthodox within the known shared school culture. Moreover, our relationship and shared school culture may have led to omissions in the data about aspects of pedagogy and underlying beliefs that seemed too obvious to mention in the interview situation.

QUT ethical approval was gained for the study; ethics approval number is 1400000619. The data have been preserved according to the QUT ethical guidelines.

Chapter 4: Quantitative Results

4.1 Introduction

This chapter presents the analysis of the quantitative data of the study. The first data to be considered are the Coh-Metrix data generated about the students' first essays, written as first drafts, and their second essays, which were polished assignments. The analysis began by investigating whether there were differences in the measures of interest in essays written by the same students under different conditions of first draft and polished assignment. This was followed by a more detailed examination of the changes to usage of nouns, lexical verbs, adjectives and adverbs across the two essays in the different classes in order to investigate possible mechanisms for the changes in lexical density that occurred. The analysis then considered whether learning the succinctness strategies made a difference to the students' texts by comparisons with the texts of students who did not learn the strategies. This was followed by investigation of a possible correlation between increased lexical density and an estimate of the students' initial writing skills.

The first section (Section 4.2) deals with lexical density (calculated from the Coh-Metrix data on incidence of nouns, lexical verbs, adjectives and adverbs), left embeddedness, and the mean number of modifiers before the main verb of the first and second essays. This section will address Research Question 1: Do lexical density, left embeddedness and the mean number of modifiers per noun phrase change from Essay 1, which is a first draft, to Essay 2, which is a polished assignment? This section includes discussion of sample texts which are included to embody the measures being discussed. It must be understood that the measures are calculated across the students' whole texts. A short extract can give only an

incomplete idea of all the factors that led to the final measure. However, the extracts attempt to illustrate typical patterns and key factors in the sentence-level characteristics of the texts. The first section concludes with an analysis of the lexical density data by its constituent grammatical parts in order to attempt to further understand the process by which students have increased lexical density in their second essays.

The second section (Section 4.3) compares the changes in these measures between the first and the second essays across the two groups of students: those who learnt strategies to improve the succinctness of their essays (the intervention classes), and the students who were not explicitly taught strategies to improve succinctness (the control classes). This section addresses Research Question 2: Are these changes the same for the intervention group and the control group?

The third section (Section 4.4) reports correlations between the change in lexical density across the two essays and the number of dependent clauses in the first essay for students in the intervention classes. This section addresses Research Question 3: For individual students in the intervention group, can the number of dependent clause structures used in Essay 1 be related to changes in lexical density from Essay 1 to Essay 2? This analysis was designed to investigate possible links between the students' level of writing development and their use of the succinctness strategies. Correlations between these data were sought using a Pearson correlation analysis. The final section of the chapter (Section 4.5) presents a brief summary of this quantitative data analysis and an overview of Chapter 5.

4.2 Investigation of lexical density, left embeddedness, and the mean number of modifiers per noun phrase from draft essay to polished assignment

This section examines the data regarding the changes from Essay 1 to Essay 2 of both groups of students. Its purpose is to establish if and how the three Coh-Metrix measures differ between texts written by the same students under the different conditions of first draft and polished assignment.

4.2.1 Change in lexical density from the draft essay to the polished assignment

A one way repeated measures ANOVA was carried out to compare change in lexical density from Essay 1 (a first draft) to Essay 2 (a polished assignment). Assumptions for ANOVA[3] are set out in Table 4.1.

Table 4.1 Assumptions for ANOVA for change in lexical density Essay 1 to Essay 2

Assumption	How this assumption is met
1.The dependent variable should be an interval or ratio variable.	1. The dependent variable, lexical density, is a ratio of the number of nouns, lexical verbs, adjectives and adverbs per 1000 words.
2. The independent variable should consist of two or more categorical, independent groups.	2. The independent variable categories are Essay 1 and Essay 2.
3. There should be independence of observations, for example, different participants in each group.	3. Each student is in one class only and thus no student who is in the intervention classes is in the control classes. Therefore, no participant is in more than one group.
4. There should be no significant outliers.	4. The box plots (**Error! Reference source not found.**) show no significant outliers.
5. The dependent variable should be approximately normally distributed for each group of the independent variable.	5. The dependent variable is approximately normally distributed for each group of the independent variable. F =1.25, p = 0.542 (control) and F = 0.80, p = 0.554 (intervention), meaning that there is no evidence to suggest that the distributions are not normal.
6. There should be homogeneity of variances.	6. Homogeneity of variances is shown by Levene's test statistic (0.48, p = 0.490) (control) and (0.19, p = 0.661) (intervention).

[3] All assumptions for ANOVA follow guidelines set out in Field, Miles & Field, 2012, pp. 169 -191.

The one way repeated measures ANOVA showed evidence of statistically significant changes in lexical density between draft and polished assignment for both control and intervention classes. There was a significant effect for control classes, F (1, 60) = 12.57, p = .001 with a large effect size (Cohen's d = 0.8). There was also a statistically significant effect for the intervention classes, F (1, 56) = 24.61, p < .001, again with a large effect size (Cohen's d = 1.3). These data show that compared to the lexical density of their texts when writing a one-draft essay, these Year 9 students writing a polished assignment wrote with greater lexical density, that is, more succinctly. Descriptive statistics, including means, standard deviations and the range are presented in Table 4.2.

Table 4.2 Change in lexical density between Essay 1 and Essay 2

Control/ intervention	Essay	N	Mean	St Dev	Min	Max
Control classes	1	31	536	27	472	592
Control classes	2	31	559	24	517	610
Intervention classes	1	29	533	22	491	584
Intervention classes	2	29	563	24	526	627

Comparative distributions for the ANOVA are presented in Figure 4.1. Note that the box plot shows a larger increase in the intervention classes than the control classes and that the median value of Essay 2 is above the third quartile mark for Essay 1 for these intervention classes.

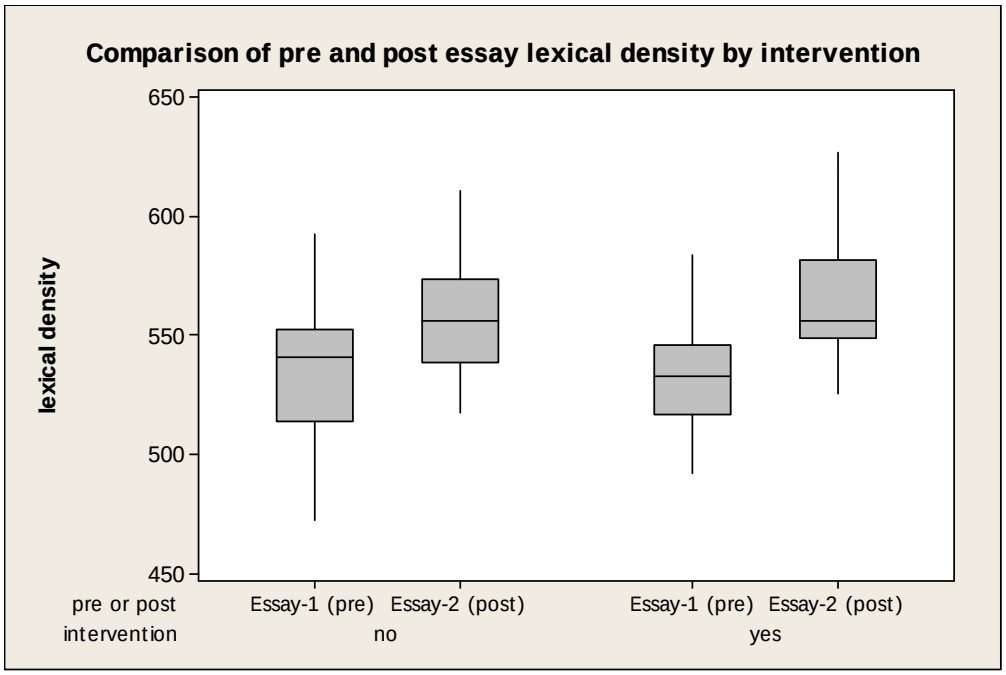

Figure 4-1 Box plot comparing the distributions of the lexical density for Essay 1 (pre) with Essay 2 (post) for control and intervention classes

4.2.2 Examination of example texts for lexical density

Examination of example texts for different levels of lexical density can clarify the meaning of these data. An essay text that scores below the median for this cohort on lexical density tends to use many dependent clauses and few extended noun

phrases. At Year 9 level, the style is under-developed and rather diffuse. Annabelle, (a pseudonym) whose Essay 2 has the lowest lexical density score in the cohort at 513, illustrates this well. She writes five dependent clauses (marked by brackets) in 70 words.

> *This is very important to the development of Tom's character [as it is the first time in the novel] [that there is a bond between Hester and himself in a way of neutral* (sic) *need for each other] and shows Tom putting his trust into Hester [as he leaps after her]. Air Haven tests Tom's use of trust and demonstrates [how he has developed] [since he was dumped from London].*

Two sentences from Bernadette's (a pseudonym) Essay 2, with the highest lexical density in this cohort at 627, illustrate the difference a greater lexical density can make. Bernadette's style is more mature and characterised by the use of some extended noun phrases, for example, "his long-held negative thoughts about the anti-traction league" in which she skilfully condenses several linked ideas. Bernadette has managed to convey a number of ideas in 33 words, using only one dependent clause (marked in brackets).

> *Having lived his whole life in London, Tom had never before encountered anyone outside of London. [Once Tom starts meeting anti-tractionists] he starts to change his long-held, negative thoughts about the anti-traction league.*

4.2.3 Change in left embeddedness from the draft essay to the polished assignment

A one way repeated measures ANOVA was carried out to compare change in left embeddedness from Essay 1 (a first draft) to Essay 2 (a polished assignment).

Both control and intervention groups were tested. Assumptions for ANOVA are set out in Table 4.3.

Table 4.3 Assumptions for ANOVA for change in left embeddedness from Essay 1 to Essay 2

Assumption	How this assumption is met
1. The dependent variable should be an interval or ratio variable.	1. The dependent variable, left embeddedness, as measured by Coh-Metrix, is the mean number of words before the main verb per sentence.
2. The independent variable should consist of two or more categorical, independent groups.	2. The independent variable categories are Essay 1 and Essay 2.
3. There should be independence of observations, for example, different participants in each group.	3. Each student is in one class only and thus no student who is in the intervention classes is in the control classes. Therefore, no participant is in more than one group.
4. There should be no significant outliers.	4. The box plot (Figure 4-2) shows there is only one outlier.
5. The dependent variable should be approximately normally distributed for each group of the independent variable.	5. The dependent variable is approximately normally distributed for each group of the independent variable. $F = 1.08$, $p = 0.884$. (control classes) and $F = 1.13$, $p = 0.744$ (intervention classes). There is no evidence to suggest that the distributions are not normal.
6. There should be homogeneity of variances.	6. Homogeneity of variances is shown by Levene's Test Statistic (0.59, $p = 0.445$, control classes; 0.05, $p = 0.830$, intervention classes.)

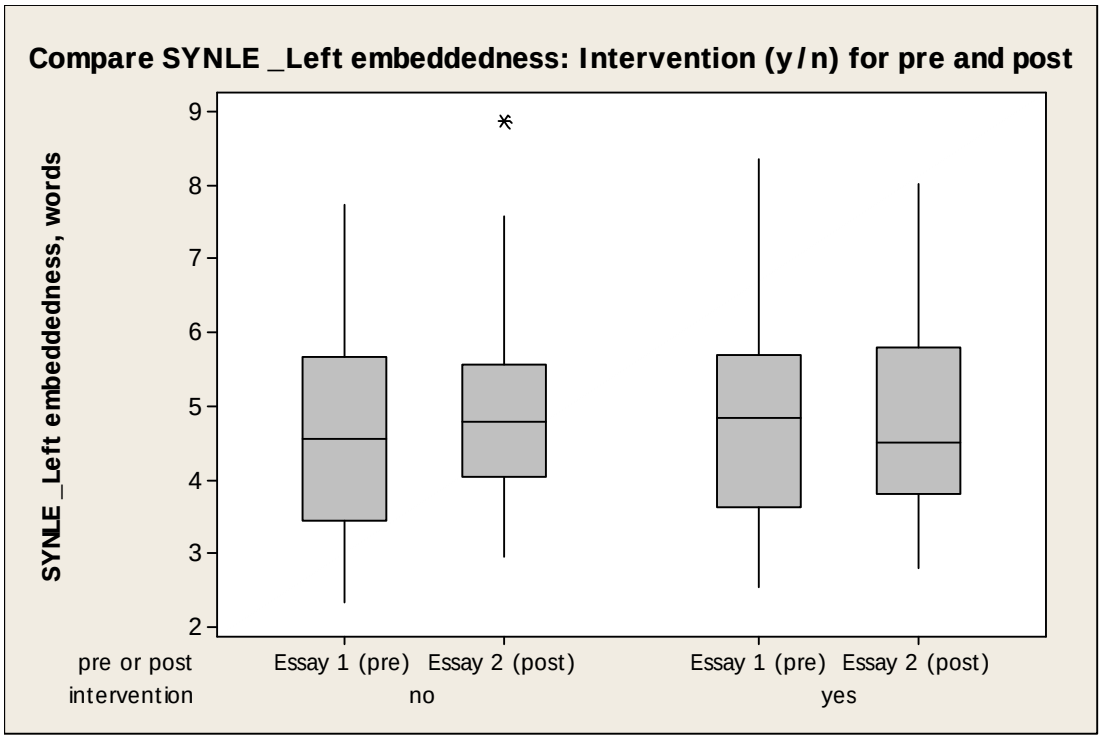

Figure 4-2 Box plot for changes in left embeddedness Essay 1 to Essay 2

For the control classes, the one way repeated measures ANOVA was not significant, F (1, 60) = 1.80, p = .185. Similarly, for the intervention classes, the ANOVA was not significant, F (1, 56) = 0.00, p = .986. The descriptive data are displayed in Table 4.4.

Table 4.4 Change in left embeddedness between Essay 1 and Essay 2

Intervention/ non intervention	Essay	N	Mean	St Dev	Min	Max
Control classes	1	31	4.5	1.327	2.3	7.7
Control classes	2	31	4.9	1.279	2.9	8.8
Intervention classes	1	29	4.8	1.436	2.5	8.3
Intervention classes	2	29	4.8	1.350	2.8	8.0

Comparing the data for the four classes individually adds more light to the interpretation of these figures in that the largest change occurred in one of the control

classes, class D, while there were much smaller changes in Classes A, B and C. These data are set out in Table 4.5.

Table 4.5 Change in left embeddedness from Essay 1 to Essay 2 for Classes A, B, C, D

Class	Essay	N	Mean	St Dev	Min	Max
A	1	13	4.89	1.290	2.7	6.9
A	2	13	4.94	1.60	2.8	8.0
B	1	16	4.69	1.58	2.54	8.35
B	2	16	4.67	1.14	3.11	6.95
C	1	19	4.88	1.26	2.34	7.71
C	2	19	4.94	1.32	2.95	8.86
D	1	12	3.92	1.25	2.33	6.23
D	2	12	4.98	1.27	3.35	7.57

As Table 4.5 shows, Class D had a mean of 3.92 on the first essay, compared to mean scores between 4.7 and 4.9 for the other three classes. In Essay 2, Class D students improved their mean syntactic complexity to 5.0, now comparable with the means of 4.9 for Classes A and C and 4.7 for Class B/I. Thus, the increase in syntactic complexity in the whole control group is a result of one class changing from a score that is much lower than the group mean to one that tracks the scores in the other classes for the assignment. As shown in Table 4.5, these data also demonstrate a wide range of scores for this measure; essays written by these students show sentences with a wide range of left embeddedness.

One way repeated measures ANOVAs were carried out for each class individually. The assumptions for ANOVA are set out in Table 4.6.

Table 4.6 Assumptions for ANOVA for change in syntactic complexity by class

Assumption	How this assumption is met
1. The dependent variable should be an interval or ratio variable.	1. The dependent variable, left embeddedness, is the mean number of words before the main verb per sentence.
2. The independent variable should consist of two or more categorical, independent groups.	2. The independent variable categories are Essay 1 and Essay 2.
3. There should be independence of observations, for example, different participants in each group.	3. Each student is in one class only and thus no student who is in the intervention classes is in the control classes. Therefore, no participant is in more than one group.
4. There should be no significant outliers.	4. The box plots (Figure 4.4) show only one outlier.
5. The dependent variable should be approximately normally distributed for each group of the independent variable.	5. The F statistics and its *p* values are set out in Table 4.7. For each group, there is no evidence that the dependent variable is not approximately normally distributed.
6. There should be homogeneity of variances.	6. Levene's test statistics and *p* values are set out in Table 4.7. Homogeneity of variances is observed in all groups.

Table 4.7 *F* statistics and its *p* values, and Levene's test statistics and *p* values for left embeddedness by individual classes

Class	*F* statistic	*p* value	Levene's test statistic	*p* value
A	0.64	0.458	0.52	0.483
B	1.93	0.216	0.73	0.400
C	0.92	0.856	0.08	0.774
D	0.97	0.959	0.01	0.908

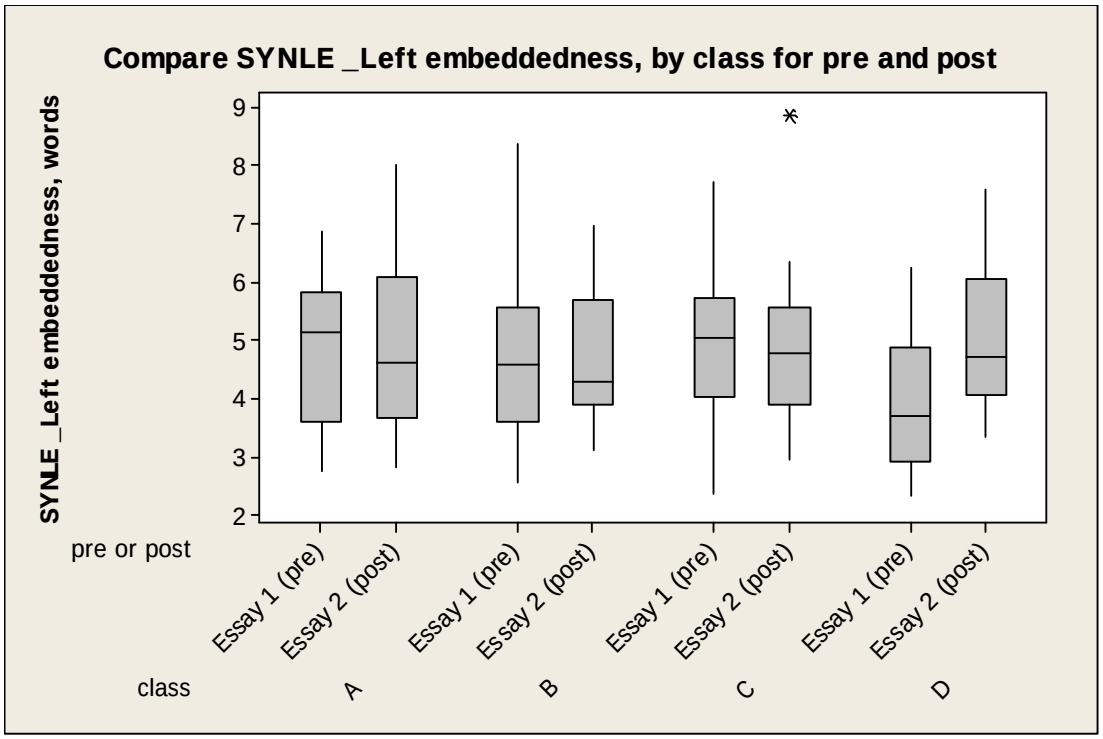

Figure 4-3 Comparison of left embeddedness Essay 1 to Essay 2 by class

The one way repeated measures ANOVAs showed changes in left embeddedness were not statistically significant in Classes A, B and C. Change in left embeddedness approached significance at .05 for Class D with a large effect size (Cohen's *d* =0.8). These data are set out in Table 4.8.

Table 4.8 Data for ANOVAs for change in left embeddedness by class

Class	*F*	*p*	Cohen's *d*
A	$F(1, 24) = 0.01$	0.932	0.038
B	$F(1, 30) = 0.00$	0.953	0.018
C	$F(1, 36) = 0.02$	0.897	0.039
D	$F(1, 22) = 4.24$	0.052	0.846

4.2.4 Examination of example texts for left embeddedness

Coh-Metrix calculates left embeddedness by the mean number of words before the verb in the main clause and this can give an indication of the sophistication of the

writer's style. For example, the lowest score in the cohort for the polished assignment, Callum's (a pseudonym) text, at 2.8, is characterised by a very simple style in which sentences start with the principal clause (marked in brackets) and have a simple subject followed by the verb (marked **bold**).

> *[Tunbridge Wheels]* ***is*** *the sort of city that no-one out of it wants to be a part of but it is the city that makes Tom unsure about his views on London and Municipal Darwinism. [Tom]* ***noticed*** *there was something about this place he didn't like and had an uneasy feeling about the foggy side streets when Tom and Hester climb onto Tunbridge wheels. [This] clearly* ***shows*** *his initial feelings about Tunbridge Wheels.*

Students who use introductory phrases and clauses in their sentences produce higher scores in syntactic complexity. An example is the highest score in the cohort for the polished essay at 8.8, Don's (a pseudonym) text. (Main verbs are **bold**.)

> *As Anna Fang leads Tom and Hester towards the great Anti-Traction city, Tom, who had been taught that static settlements were dinghy, squalid, backwards places,* ***went*** *to the window and stared. Although Tom was in awe of the city that could have been blown to pieces by Medusa, he* ***didn't think*** *it was such a bad idea, because it was only natural that Traction cities should eventually spread right across the globe.*

The high left embeddedness of this text is created by beginning sentences with dependent clauses and using embedded dependent clauses before the main verb. For example, the first sentence begins with an adverbial clause, *As Anna Fang leads Tom and Hester towards the great Anti-Traction city.* This is followed by the subject (*Tom*) of the main verb (*went*). Between the subject and main verb there is an

embedded adjectival clause *who had been taught that static settlements were dinghy, squalid, backwards places.* The next sentence begins with two dependent clauses before the subject *he* and the verb *didn't think*.

Thus the left embeddedness measure can provide objective comparisons on overall class progress in improving aspects of writing style such as skilled use of a variety of sentence beginnings.

4.2.5 Change in mean number of modifiers per noun phrase from the draft essay to the polished assignment

A one way repeated measures ANOVA was carried out to compare change in the mean number of modifiers per noun phrase from Essay 1 (a first draft) to Essay 2 (a polished assignment). Assumptions for ANOVA are set out in Table 4.9.

Table 4.9 Assumptions for ANOVA for change in mean number of modifiers per noun phrase

Assumption	How this assumption is met
1.The dependent variable should be an interval or ratio variable.	1. The dependent variable, mean number of modifiers per noun phrase is a number.
2. The independent variable should consist of two or more categorical, independent groups.	2. The independent variable categories are Essay 1 and Essay 2.
3. There should be independence of observations, for example, different participants in each group.	3. Each student is in one class only and thus no student who is in the intervention classes is in the control classes. Therefore, no participant is in more than one group.
4. There should be no significant outliers.	4. The box plots (Figure 4-4) show only one outlier.
5. The dependent variable should be approximately normally distributed for each group of the independent variable.	5. The dependent variable is approximately normally distributed for each group of the independent variable. $F = 3.24$, $p = 0.002$ (control classes) and $F = 1.58$, $p = 0.230$ (intervention classes)
6. There should be homogeneity of variances.	6. Homogeneity of variances is shown by Levene's test (13.65, $p = 0.00$ for control classes; 0.77, $p = 0.383$, intervention classes)

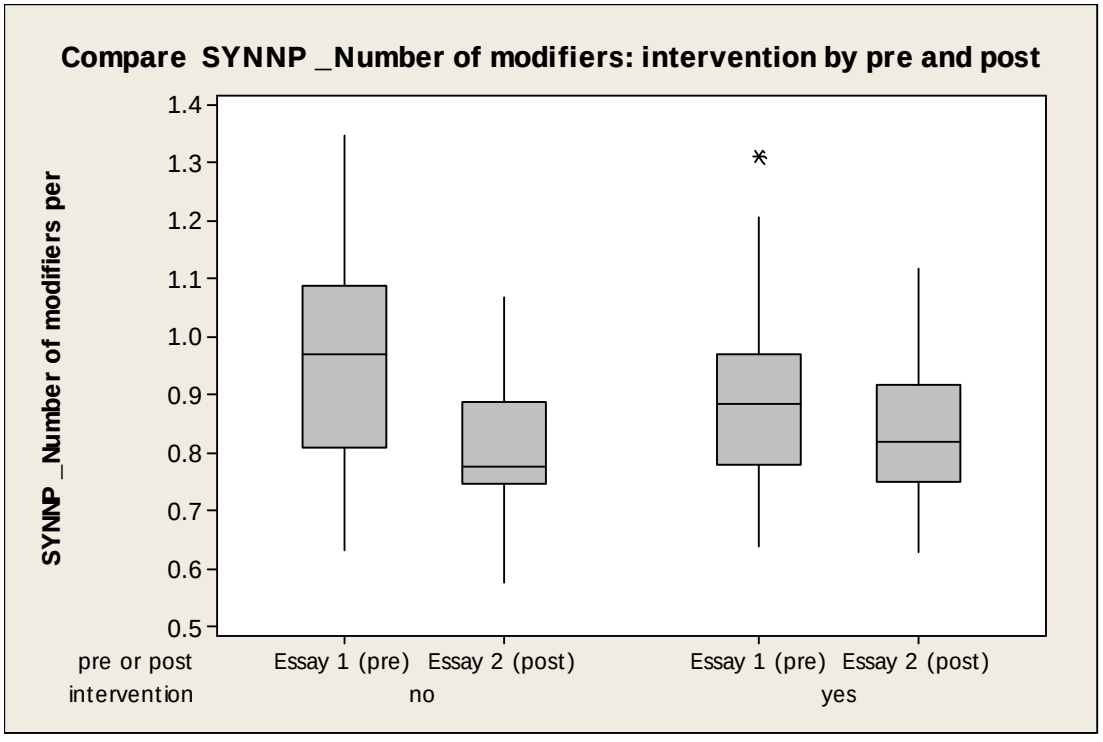

Figure 4-4 Box plot graph of mean number of modifiers per noun phrase, control and intervention groups

The one way repeated measures ANOVA showed a statistically significant change in mean number of modifiers per noun phrase for the control group F (1, 60) =11.84, p = 0.001, with a medium effect size (Cohen's d = 0.70). The ANOVA for the intervention group was not significant F (1, 56) = 2.69, p = 0.106.

The descriptive data for the mean number of modifiers per noun phrase across Essay 1 and Essay 2 are set out in Table 4.10.

Table 4.10 Mean Number of Modifiers per Noun Phrase in Essay 1 and Essay 2

Control / Intervention	Essay	N	Mean	St Dev	Min	Max
Control classes	1	31	0.95	0.20	0.63	1.34
Control classes	2	31	0.80	0.11	0.57	1.06
Intervention classes	1	29	0.89	0.16	0.64	1.31
Intervention classes	2	29	0.83	0.13	0.62	1.12

These changes are decreases in the mean number of modifiers per noun phrase. Although as shown above, the students have produced texts with a mean increase in lexical density, there is a decrease in this measure. Clearly, in this case, while the model predicted that mean number of modifiers per noun phrase would increase along with lexical density, the increase in lexical density has been achieved by other means than an increase in mean number of modifiers per noun phrase. This result is further explored below.

4.2.6 Examination of example texts for the mean number of modifiers per noun phrase

As discussed in Chapter 2, the use of the extended noun phrases, containing many modifiers, is a characteristic of more skilled expository writing. As Hunt (1970, p 25) explained, more skilled writers write longer clauses and the mechanism

for lengthening the clause is greater use of the extended noun phrase. Use of modifiers in noun phrases is not yet well developed in this student cohort, with means around 0.8 and few students scoring above 1. However, there is a definite contrast between a text with a score of 0.6 and one with a score of 1.0 in this measure.

The texts with the lowest mean number of modifiers per noun phrase are usually written in a simple plain style lacking in detail. Frederick's (a pseudonym) text, which at 0.58 is the lowest score of the cohort for the polished assignment illustrates this style. Clearly, Frederick is not using many modifiers in his noun phrases (Marked in brackets).

> *She sounded as if she didn't much care either way. So for her to want Tom on [the air balloon] with her is [a big difference to someone so cold-like at the beginning]. So in Airhaven Tom realises that he can trust people after a while if he gives them [a chance].*

In the polished assignment text with the highest average number of modifiers per noun phrase, Emily's text at 1.1, the amount of detail presented is greater due to the use of more adjectives in the noun phrases. (Noun phrases are marked in brackets).

> *[The cold, slimy bare Earth] was unwelcoming for Tom. He was used to [the whirr of ventilator], [the hum and rattle of distant elevator shafts]. This is Tom's first experience on [non-moving land]. Tom's companion, Hester Shaw, persuades Tom that traction cities are stupid and that there is no reason for them to be roaming around [the bare earth].*

Thus this Coh-Metrix measure can be a guide to the amount of detail in a student text at this level and has potential to guide secondary school writing teaching strategies.

4.2.7 Breakdown of lexical density changes data by grammatical category.

Lexical density was calculated from the Coh-Metrix data by adding incidence scores for nouns, lexical verbs, adjectives and adverbs. The data discussed above show that mean lexical density increased at a statistically significant level for both groups of students. However, mean number of modifiers per noun phrase *decreased* in both groups, at a statistically significant level for the control group. Clearly, the mechanism for the increase in lexical density is not increased use of the extended noun phrase. Understanding what other factors have caused the increase in lexical density in this case has potential to give a more complete picture of how lexical density can be increased in student texts.

To better understand the processes underlying the changes in lexical density between draft and polished essay, comparisons were made by class group of the mean numbers of nouns, lexical verbs, adjectives and adverbs in the two essays. These data are summarized in Table 4.11, Table 4.12 Table 4.13 and Table 4.14, and reveal that the increases in lexical density result from different combinations of changes. A further possible factor in increased lexical density is sentence length. A summary of changes in mean sentence length is presented in Table 4.15 .

4.2.8 Noun incidence change between Essay 1 and Essay 2 by class

Only Class A/I students show an increase in the average incidence of nouns in their second essay. Class A/I students also have the highest average incidence of nouns at 308 in Essay 2. Students in Classes B/I, C/C and D/C decreased their

incidence of nouns. Having a lower incidence of nouns per 1,000 words is consistent with writing a more detailed text in which more adverbs and adjectives are used to add the detail. Class A/I's increase may indicate that they have used more nouns by using more nominalisation, as they were encouraged to do by the intervention. This possibility is discussed in more detail in Chapter 5. The data for changes in mean nouns incidence are set out in Table 4.11.

Table 4.11 Comparison of mean noun incidence Essay 1 to Essay 2 across Classes A-D

Class	N	Essay	Mean	St dev	Min	Max	Change in mean Essay 1 – Essay 2
A	13	1	289	25.70	238	327.16	
A	13	2	308	26.73	268	370.27	+19
B	16	1	271	34.08	210	334	
B	16	2	262	26.28	216	297	-9
C	19	1	302	33	224	366	
C	19	2	294	25	258	332	-8
D	12	1	303	31.94	265	354	
D	12	2	285	13.13	266	304	-18

4.2.9 Verb incidence change between Essay 1 and Essay 2 by class

Changes in lexical verb incidence across the two essays are also varied. /I's lexical verb incidence does not change; Classes A/I and D/C increase by 6 and 7 respectively, a small change; Class C/C increases lexical verb incidence by 28 from a low mean in Essay 1 of 117, compared to Essay 1 means of 140 – 152 in the other classes. Class C/C's mean number of lexical verbs for Essay 2 is still the lowest in the cohort, but is nearer to the other means for Essay 2.

Lexical verb usage relates to the number of clauses written. "Lexical verbs occur as the head or main verb of verb phrases: has **written**, will be **writing**. Verb

phrases serve as the centre of clauses" (Biber et al., 1999, p. 63). A sentence can have just one clause, but having two lexical verbs in a sentence usually means there are two clauses. These data suggest that Class B/I wrote the same number of clauses per 1,000 words in both essays; Classes A/I and D/C increased their clause incidence a little; and Class C/C wrote a more complex text in which they used many more clauses to add detail to their argument. These data are set out in Table 4.12 .

Table 4.12 Comparison of mean verb incidence Essay 1 to Essay 2 across Classes A-D

Class	N	Essay	Mean	St dev	Min	Max	Change in mean Essay 1 to Essay 2
A/I	13	1	141	13.26	119	162	
A/I	13	2	147	11.30	123	161	6
B/I	16	1	152	25.93	100	195	
B/I	16	2	152	15.05	119	180	0
C/C	19	1	117	25.23	79	162	
C/C	19	2	145	11.94	121	169	28
D/C	12	1	150	14.89	126	176	
D/C	12	2	157	13.91	137	174	7

4.2.10 Adjective incidence change between Essay 1 and Essay 2 by class

Classes A and C decreased incidence of adjectives slightly while Classes B and D increased their adjective incidence quite a lot. However, as in some other measures, Class D students have brought their usage up to 67, comparable with the other classes' means, from a lower starting point at 53. For Essay 2, Class B/I used the highest mean incidence of adjectives of the cohort by a noticeable margin.

Using adjectives is another way to add detail to a text. These data suggest that Classes A/I and C/C found other ways to add needed detail to their Essay 2, while

Classes B/I and D/C used adjectives for this purpose. These data are set out in Table 4.13.

Table 4.13 Comparison of mean adjective incidence Essay 1 to Essay 2 across Classes A-D

Class	N	Essay	Mean	St dev	Min	Max	Change in mean Essay 1 – Essay 2
A	13	1	73	14.70	54	100	
A	13	2	70	11.20	53	91	-3
B	16	1	60	15.92	27	86	
B	16	2	82	10.46	59	105	22
C	19	1	73	22.29	31	136	
C	19	2	65	13.75	46	107	-8
D	12	1	52	11.34	38	78	
D	12	2	67	17.51	47	92	15

4.2.11 Adverb incidence change between Essay 1 and Essay 2 by class

All classes increased adverb incidence from the first essay to the second by between 10 and 15, suggesting that students used adverbs to add detail or to improve the precision of their arguments in their polished assignments. On average students added 5 or 6 adverbs to their texts in writing a polished assignment of approximately 600 words. These data are set out in Table 4.14 .

Table 4.14 Comparison of mean adverb incidence Essay 1 to Essay 2 across Classes A-D

Class	N	Essay	Mean	St dev	Min	Max	Change in mean Essay 1 – Essay 2
A	13	1	37	12.28	11	54	
A	13	2	47	14.18	26	77	10
B	16	1	44	13.57	18	70	
B	16	2	59	16.62	31	93	15
C	19	1	40	13.68	19	69	
C	19	2	52	12.57	24	77	12
D	12	1	37	11.52	17	52	
D	12	2	52	12.86	31	73	15

4.2.12 Mean sentence length change between Essay 1 and Essay 2 by class

Students in Classes A/I and B/I increased mean sentence length by one word. Students in Class C/C decreased mean sentence length by 2 words to 22, coming closer to the cohort mean. Students in Class D/C increased mean sentence length by 4 words to reach a mean that compares with the other students' means from their lower Essay 1 mean of 16. Mean sentence length on all the assignments (Essay 2) was between 20 and 22. These data are set out in Table 4.15 .

Lexical density increases as writers use more nouns, lexical verbs, adjectives and adverbs relative to the other words in their sentences. Lengthening a sentence by using, for example, more adverbs and adjectives to add detail will increase lexical density. Decreasing sentence length will also increase lexical density if the grammatical rather than the content words are reduced. Changing dependent clauses to extended noun phrases or non-finite clauses (e.g. phrases beginning with present participles) are two ways to do this.

Table 4.15 Comparison of mean change in sentence length Essay 1 to Essay 2 across Classes A-D

Class	N	Essay	Mean	St dev	Min	Max	Change in mean Essay 1 – Essay 2
A	13	1	20	3.475	16	27	
A	13	2	21	2.637	18	26	1
B	16	1	21	3.615	14	29	
B	16	2	22	3.772	16	31	1
C	19	1	24	4.370	17	34	
C	19	2	22	3.248	17	29	-2
D	12	1	16	2.963	13	22	
D	12	2	20	3.510	16	27	4

4.2.13 Summary of grammatical changes Essay 1 to Essay 2 by classes

Clearly, the data indicate that combinations of changes produced the changes in lexical density between Essay 1 and Essay 2. Changing lexical density in a text is not necessarily a simple process but can happen in a variety of ways. A summary of the changes is presented in Table 4.16.

Table 4.16 Summary of changes in mean grammatical category incidence and sentence length from Essay 1 to Essay 2

	Intervention classes		Control classes	
Class	A	B	C	D
Number of students	13	16	19	12
Noun incidence	+19	-9	-8	-18
Lexical verb incidence	+6	0	+28	+15
Adjective incidence	-3	+22	-8	+15
Adverb incidence	+10	+15	+12	+15
Mean sentence length	+1	+1	-2	+4

4.3 Comparison of the change in lexical density, left embeddedness and the number of modifiers per noun phrase between control and intervention classes

The second stage of this analysis seeks to answer the second research question: Is there a difference in the changes between Essay 1 and Essay 2 in lexical density, left embeddedness and the mean number of modifiers per noun phrase between the control and the intervention classes? This analysis focused on discovering differences between the texts written by the students who were taught explicit strategies to improve succinctness and by the students who were not taught these strategies.

4.3.1 Comparison of the change in lexical density between control and intervention classes

The change in lexical density between Essay 1 and Essay 2 for each student was calculated by subtracting the lexical density score of the first essay from the score of the second essay. These new data were then compared by control and intervention classes to examine the mean increase in the two groups. A repeated measures ANOVA was carried out to compare change in lexical density by control and intervention groups. Assumptions for ANOVA are set out in Table 4.17.

Table 4.17 Assumptions for ANOVA for change in lexical density Essay 1 to Essay 2 between control and intervention classes

Assumption	How this assumption is met
1. The dependent variable should be an interval or ratio variable.	1. The dependent variable, lexical density, is a ratio of the number of nouns, lexical verbs, adjectives and adverbs per 1000 words.
2. The independent variable should consist of two or more categorical, independent groups.	2. The independent variable categories are Essay 1 and Essay 2.
3. There should be independence of observations, for example, different participants in each group.	3. Each student is in one class only and thus no student who is in the intervention classes is in the control classes. Therefore, no participant is in more than one group.
4. There should be no significant outliers.	4. The box plots (Figure 4-5) show one outlier in the control group and two in the intervention group.
5. The dependent variable should be approximately normally distributed for each group of the independent variable.	5. The dependent variable is approximately normally distributed for each group of the independent variable. The *F*-test for these data showed a value of 2.76, $p = 0.008$, meaning that there is no evidence to suggest that the distributions are not normal.
6. There should be homogeneity of variances.	6. Levene's test shows a Test Statistic of 5.38, $p = 0.024$.

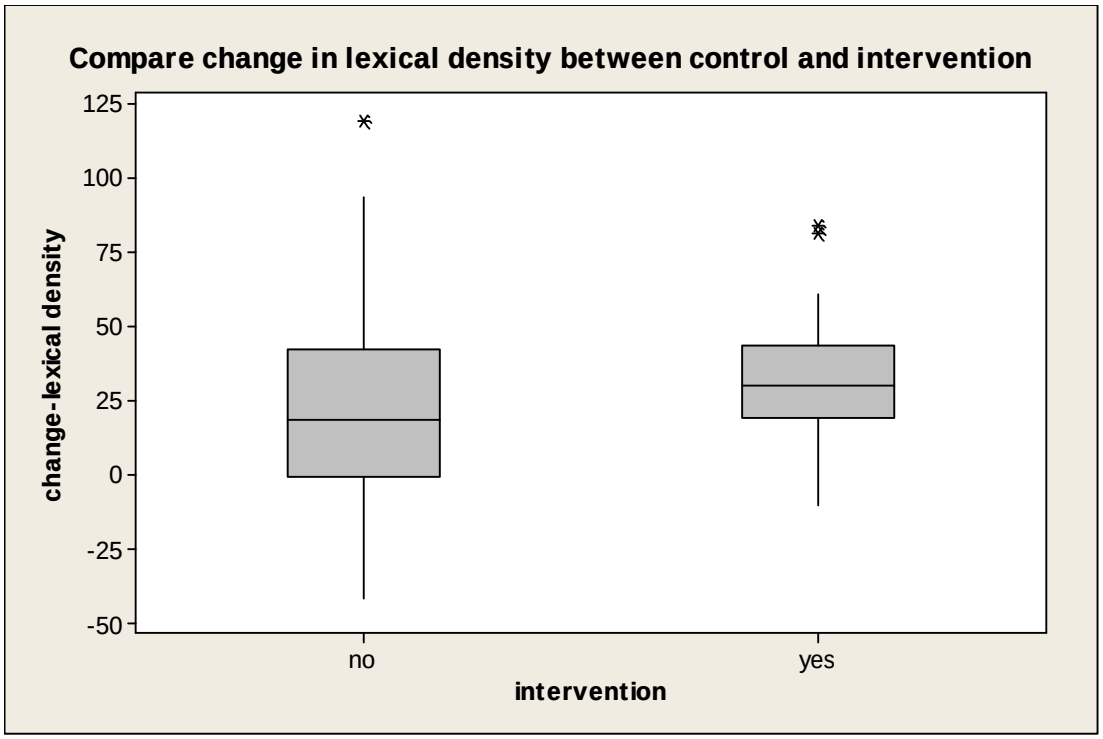

Figure 4-5 Box plot of the distributions of changes in lexical density for control and intervention classes

The descriptive data for this comparison are set out in Table 4.18. The intervention classes increased mean lexical density scores more than the control classes. The range of change in lexical density was smaller for the intervention classes than for the control classes.

Table 4.18 Change in Lexical Density for intervention and control classes

Control/ intervention	N	Mean	St Dev	Min	Max
Control classes	31	23.34	37.26	-41	119
Intervention classes	29	30.28	22.44	-10	83

The one way repeated measures ANOVA was not significant, $F(1, 58) = 0.75$, $p = 0.39$. Thus, while the intervention classes' mean change was greater than the control classes' mean change, there is no significant difference between the change in lexical density of the essays written by students in the two groups. The

intervention classes were taught explicit strategies to improve succinctness or lexical density. These data do not support the hypothesis that the explicit instruction made a difference to student outcomes on this measure.

4.3.2 Comparison of the change to left embeddedness between intervention and control classes

The change in syntactic complexity between Essay 1 and Essay 2 for each student was calculated by subtracting the left embeddedness score of the first essay from the score of the second essay. These new data were then examined by intervention and control classes to compare the mean change in the two groups. The assumptions for the ANOVA were tested and statistical difference sought by comparing the distribution of the differences by intervention and control using an ANOVA. The assumptions for ANOVA are set out in Table 4.19.

Table 4.19 Assumptions for ANOVA for change in left embeddedness between Essay 1 and Essay 2 by control and intervention classes

Assumption	How this assumption is met
1.The dependent variable should be an interval or ratio variable.	1. The dependent variable, left embeddedness is measured as the mean number of words before the main verb in each sentence of the text.
2. The independent variable should consist of two or more categorical, independent groups.	2. The independent variable categories are Essay 1 and Essay 2.
3. There should be independence of observations, for example, different participants in each group.	3. Each student is in one class only and thus no student who is in the intervention classes is in the control classes. Therefore, no participant is in more than one group.
4. There should be no significant outliers.	4. As shown on the box plot graph (Figure 4-6), there are two outliers in the control classes and none in the intervention classes.
5. The dependent variable should be approximately normally distributed for each group of the independent variable.	5. The dependent variable is approximately normally distributed for each group of the independent variable, *F*-test statistic 1.30. p = 0.49, meaning that there is no evidence to suggest that the distributions are not normal.
6. There should be homogeneity of variances.	6. Levene's test shows a test statistic of 0.00, and a p value of 0.984. Since the value of p is more than 0.05, the variances are not significantly different.

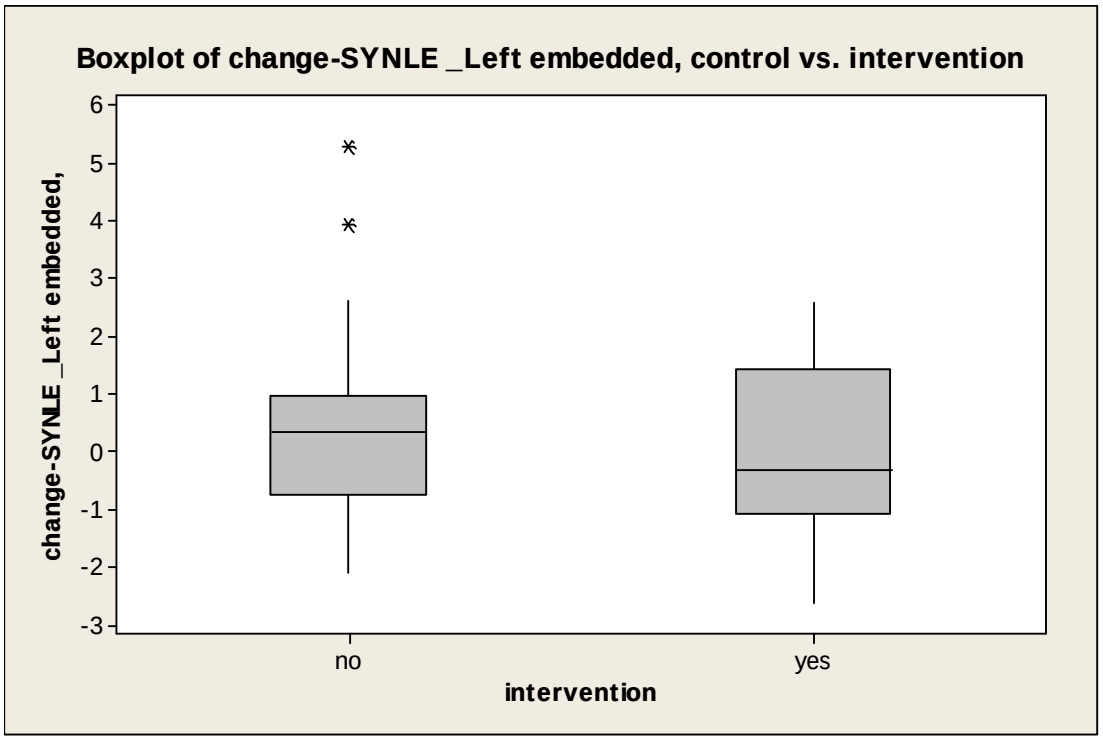

Figure 4-6 Box plot graph of change in left embeddedness for control and intervention classes

The intervention classes' mean left embeddedness scores showed almost no change, while the control classes' scores increased by 0.444. As discussed above, this change represents the texts of the students in Class D moving from scores noticeably lower than their peers' first essays to a level comparable with the level of their peers in their assignments. The descriptive data for this comparison is set out in Table 4.20.

Table 4.20 Change in left embeddedness for intervention and control classes

Control/ intervention	N	Mean	St Dev	Min	Max
Control classes	31	0.444	1.658	-2.115	5.286
Intervention classes	29	0.006	1.455	-2.647	2.577

The repeated measures ANOVA was not significant, $F(1, 58) = 1.18$, $p = 0.283$. Thus there is no clear difference demonstrated between the change in left embeddedness of the essays written by students in the two groups. As in the case of

lexical density, there is no evidence in these data to confirm that the explicit instruction in succinctness strategies made a difference to the left embeddedness of the intervention students' texts.

4.3.3 Comparison of the change to mean number of modifiers per noun phrase between intervention and control classes

The change in the mean number of modifiers per noun phrase between Essay 1 and Essay 2 for each student was calculated by subtracting the mean number of modifiers per noun phrase score of the first essay from the score of the second essay. These new data were then examined by intervention and control classes to compare the mean change in the two groups. The assumptions for the ANOVA were tested and statistical difference sought by comparing the distribution of the differences by intervention and control using the ANOVA test. The assumptions for ANOVA are set out in Table 4.21.

Table 4.21 Assumptions for ANOVA for change in mean number of modifiers per noun phrases from Essay 1 to Essay 2 for intervention and control classes

Assumption	How this assumption is met
1. The dependent variable should be an interval or ratio variable.	1. The dependent variable, mean number of modifiers before per noun phrase, is measured as a number of words.
2. The independent variable should consist of two or more categorical, independent groups.	2. The independent variable categories are Essay 1 and Essay 2.
3. There should be independence of observations, for example, different participants in each group.	3. Each student is in one class only and thus no student who is in the intervention classes is in the control classes. Therefore, no participant is in more than one group.
4. There should be no significant outliers.	4. As shown on the box plot graph, (Figure 4.8) there are no outliers.
5. The dependent variable should be approximately normally distributed for each group of the independent variable.	5. The dependent variable is approximately normally distributed for each group of the independent variable, F (1, 59) = 2.02, p = 0.065, meaning that there is no evidence to suggest that the distributions are not normal.
6. There should be homogeneity of variances.	6. Levene's test shows a test statistic of 3.30, and a p value of 0.075. Since the value of p is more than 0.05, the variances are not significantly different.

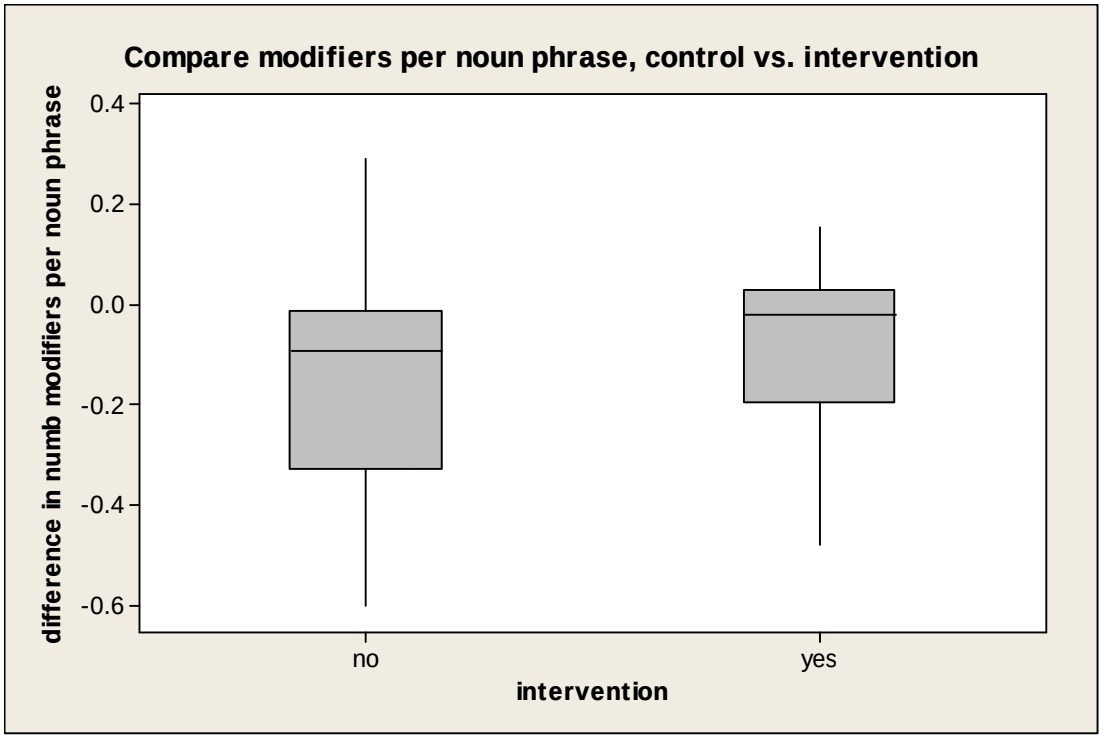

Figure 4-7 Box plot of comparison of mean number of modifiers per noun phrase control and intervention groups

The descriptive data for this comparison are set out in Table 4.22. In both groups, on average, scores on this measure decreased between the draft and the polished assignment. The intervention classes' mean scores showed a smaller mean decrease than the control classes' scores. The intervention classes' scores also have a smaller range of change in this measure.

Table 4.22 Change in mean number of modifiers per noun phrase for intervention and control classes

Control/ Intervention	N	Mean	St Dev	Min	Max
Control classes	31	0.951	0.200	0.631	1.347
Intervention classes	29	0.809	0.111	0.577	1.069

The result of the one way repeated measures ANOVA was not significant, $F(1, 58) = 2.57$, $p = 0.113$. Thus there is no clear difference between the changes in mean number of modifiers per noun phrase of the essays written by students in the two

groups. The overall change is negative, which means that the trend was for students to write fewer modifiers in the noun phrases of their polished assignments than in their first draft essays. The control group has made the larger mean change, that is, their scores have dropped more than for the intervention classes. For this study, the reduction in mean for the intervention classes suggests that having the strategy of changing dependent clauses to extended noun phrases presented to students has not made a significant difference to scores on this measure.

4.4. Correlation between changes in lexical density and number of dependent clauses in Essay 1

The third section of the quantitative data analysis was the examination of the correlation between the change in lexical density between the two essays and the number of dependent clauses in the first essay. Only the texts of the students who learned the succinctness strategies are considered in this section. As explained above, this test was designed to investigate any possible link between the students' position on the writing developmental continuum, judged by the number of dependent clauses per 300 words in their draft essay, and their change in lexical density across the two essays. Year 9 students who write with fewer dependent clauses are judged to be more able writers than their peers who write using many dependent clauses (Myhill, 2008). This test was a way to examine if students at all levels of writing development in the classes improved succinctness equally after learning the succinctness strategies, or if the strategy learning benefitted more able or less able writers disproportionately. This section begins with the presentation of the descriptive statistics (Table 4.23) followed by the data from the correlation analysis.

Table 4.23 Number of dependent clauses per 300 words in Essay 1

	Class A N=13	Class B N= 16
Mean number of dependent clauses per 300 words	13.7	9.6
Highest number of dependent clauses per 300 words	19	17.6
Lowest number of dependent clauses per 300 words	7	2.6

No correlation was found between the number of dependent clauses and change in lexical density, $r = -0.202$, $p = 0.121$. Figure 4-8 illustrates the wide range of changes in lexical density and dependent clause incidence. There is no link demonstrated between the students' position on the continuum of writing development, judged by their usage of dependent clauses, and the change in lexical density between their two essays.

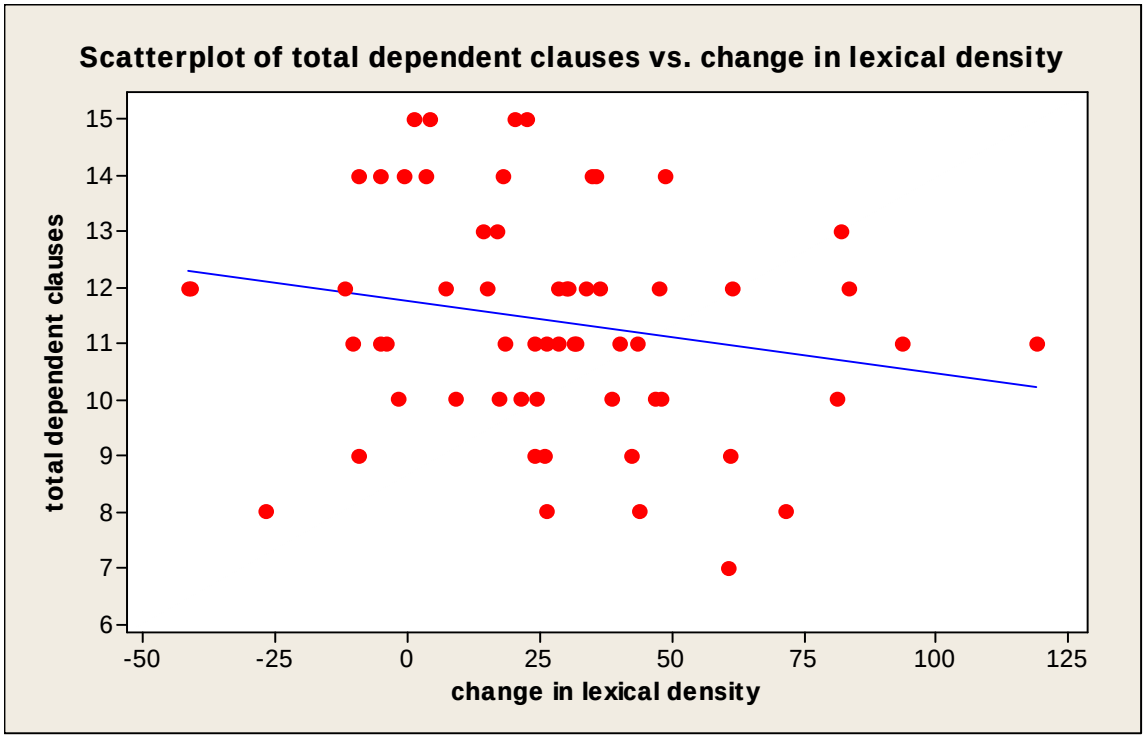

Figure 4-8 Scatter plot of total dependent clause vs change in lexical density

4.5 Conclusion

This chapter has presented an analysis of the quantitative data of the study. It has shown a statistically significant increase in lexical density in both control and intervention groups from Essay 1 to Essay 2. Analysis of the changes in lexical density by grammatical category for each class showed that classes seem to have used different combinations of changes to achieve the increases in lexical density.

A statistically significant change in the mean number of modifiers per noun phrase between Essay 1 and Essay 2 was found for the control group. This change was a decrease. The intervention group also decreased the mean number of modifiers per noun phrase, but this change was not statistically significant. No statistically significant changes in left embeddedness between Essay 1 and Essay 2 were found for either group. No correlation between the number of dependent clauses in Essay 1 and change in lexical density was demonstrated. Chapter Five presents the qualitative data and a discussion of possible links between these quantitative results and the qualitative data.

Chapter 5: Links between changes to student texts and teaching approaches

5.1 Introduction

This chapter presents analysis of the qualitative data which consisted of teacher interviews (three face-to-face and an email interview) and student learning materials. Anita and Barbara (pseudonyms) taught the intervention classes, Classes A/I and B/I respectively; Charles and Douglas (pseudonyms) taught the control classes, Classes C/C and D/C respectively. The qualitative data revealed substantial commonality, as would be expected for teachers teaching the same unit to parallel classes in the same school, as well as some differences in emphasis and strategies in reaching the goals of the unit. An overview of the themes and sub-themes selected from the data is presented in Table 5.1. Research Question 4 will guide the exploration of the commonalities and differences in teaching in this chapter.

Research Question 4: Can the variations in teaching strategies across the four classes be related to changes discussed in Research Questions 1 and 2?

Table 5.1 Themes and codes identified across the qualitative data

Themes and sub-themes	Code	Explanation
Teaching strategies above sentence-level		
Teaching overall essay structure	TS	How teachers taught overall essay structure, an important part of the essay genre.
Teaching at the within-paragraph level	TWP	How teachers taught students about paragraph structure suitable for the essay, another important aspect of the genre.
Teaching of analysis	TA	How teachers taught students to write the analysis of the novel that the question and essay genre required.
Teaching at sentence - level		
Teaching embedded quotations	TEQ	How teachers taught students to embed quotations within sentences to provide evidence for their analysis.
Teaching using drafting	TDr	How teachers used drafting to assist students to learn how to write this essay.
Teaching of sentence structures	TSS	How teachers taught a variety of sentence structures, a key aspect of the intervention of the study.
Grammar terms	GT	How teachers used grammar terms in teaching writing skills, a key aspect of contextualised grammar pedagogy.
Teachers' evaluations of intervention strategies		
Evaluation of efficacy of strategies	Ev-Ef	How intervention teachers evaluated the efficacy of the strategies used in the intervention with their classes.
Evaluation of long-term learning of strategies	Ev-LLt	Intervention teachers expressed concerns about students' longer-term learning of the new strategies.
Issues raised by teachers		
Time	Time	Teachers were very conscious of limited time as an issue that constrained their choices of teaching strategies and emphasis.

5.2.1 Teaching strategies above sentence-level: For overall essay structure

As explained by Humphrey et al. (2011, p. 12), the expository essay genre has a specific overall structure that students need to use in writing an academic essay. This structure consists of an introductory paragraph which introduces the thesis and

the main sub-topics of the essay. The following paragraphs are body paragraphs, and should present supporting arguments. The final paragraph must reinforce the thesis and show how the thesis has been proven. The task sheet for the assignment explicitly requires students to follow this structure. (See Appendix D for a copy of the task sheet.) Conscious of the importance of this generic structure, but realising that students had already been introduced to the essay form in previous units, three of the teachers wrote plans of an overall structure which their students used, as shown below. For example, as discussed in more detail below, Charles wrote a detailed guide, which included specific paragraph topics and sentence starters to suggest what details students should use. This guide is found in Appendix C. Simply presenting a plan to students, as three of the teachers did, suggests that the teachers may have assumed that the purpose of this aspect of the genre was well understood by the students but that creating a paragraph plan which would use a thesis and answer the question set for the assignment would be challenging for many students and needed to be closely modelled.

Barbara appears to have treated the overall structure as prior knowledge. She reported that she started with the body paragraphs.

> *We started with the body paragraphs, not the intro and then after we had the body we went back and we wrote a thesis. (Barbara)*

This order may seem paradoxical, but Barbara is referring to an early draft of the essay which the students subsequently shaped. Later, she recalled modelling the thinking underlying the creation of a thesis from the set question. She reported that her students wrote their own theses and paragraph plan.

> *we looked at the prompt, and we tried to figure out what it was that it was asking. So we broke it down for the kids, saying, "Look, this is what you need*

to cover: it's looking at change in the main character, and it's looking at change with a setting attached to it, different settings attached to it." So we're not just looking at how he changes overall, but we're looking at what's different between how he acts over here and what he's thinking, and how he acts over here and what he's thinking and sometimes you can't neatly package it into a setting but sometimes you can just see the changes occurring (Barbara)

Anita's comment that students' essays were all quite similar implies that she followed routine practice at the school and gave her students a thesis and paragraph outline to follow. The result of this was that students in this class wrote essays that were quite similar to those written by their Class A/I classmates.

The content was the same, but the kids who were getting As and high Bs were able to write it more eloquently and sophisticated than those who expressed it more simply. That's what it came down to. They were all using the same quotes; they were all saying the same things. (Anita)

Charles also appears to have treated the overall essay structure as prior knowledge. His reported emphasis was on making sure the students used a suitable paragraph plan. His outline was very detailed and provided an implicit model for the thinking. He reported that he began with a complete model of the opening:

I... wrote the two opening paragraphs ... I then developed a structure (after the first two paragraphs) which the students followed. (Charles)

This was followed by a detailed paragraph outline. To demonstrate the level of detail, the guide to the fourth paragraph read:

Fourth paragraph: *the Out-Country (in this episode, Tom's trust in others becomes a key consideration)*

What does the Out-Country teach Tom?

- *to survive on his own, to rely on his own faculties (e.g. making a hole in the prison wall at the Stayns trading-cluster)*
- *to develop his own thoughts in response to new experiences and outlooks of new people*
- *comment on and quote from pp 42, 44, 47, 50, 62, 64*

(Charles, student essay guide. This complete document is in Appendix D.)

The level of detail in this guide may have strongly suggested to Class C/C students that a detailed argument was required; the guide therefore must be considered a factor in Class C/C students' production of a detailed argument in their essay.

Like Charles's guidance on the essay structure, Douglas's reported approach was direct and explicit, although it was not quite as directive as Charles's detailed guide. Douglas reported using a full class discussion method to review the essay structure.

I talked about the fact that a lot of this they'd heard before in Year 8 and I got them to elicit as much as they could remember about essay structure, especially an argumentative or persuasive essay, and it seemed like there was a mixed level of recollection of all those things but we did establish as a class that they'd been taught that there was an introductory paragraph (Douglas)

Later in the unit, Douglas said, he reviewed this structure and made a whiteboard summary as part of his final review of what the assignment required.

"Does everyone remember the structure? The overall?" I went through that again actually, using boxes and arrows labelled on the right-hand side. So this would be an introductory paragraph. It would have three sentences, or at least do three things. (Douglas)

Douglas' instructions here appear to be setting up an expectation that the students will write an expository essay that followed the generic structure. Thus, the data suggest that while strategies varied across the four teachers, the expectation that the students would write an essay in the standard generic form was made very clear in the teaching of the essay structure.

5.2.2 Teaching strategies above sentence-level: Teaching at the within-paragraph level; teaching of analysis

The data indicate that the teachers believed that the paragraph level needed particular attention in their teaching. One aspect of teaching at the paragraph level focussed on showing students how to use a topic sentence followed by details to expand the topic. Another aspect was making cohesive links between paragraphs. Topic sentence and cohesive links appear to have been treated as having been introduced in earlier units and having been reviewed rather than taught as new ideas. The third aspect of emphasis for this unit was the analysis that the paragraphs needed to include. In this genre, the paragraph must present an argument with evidence and commentary that constitutes an analysis that refers to the overall thesis (Schleppegrell, 2001, p 435). These two sub-themes are treated together because the interview data suggests that teaching tended to include both aspects together. The teachers seem to have found various ways to cover what are three important features of the expository essay genre at the paragraph level, as shown in the following data extracts.

Anita reported in her interview that she began her instruction in analysis by reminding the students that feedback on Essay 1 had emphasised that they were recounting not analysing. She reflected on the usefulness of this:

> *[I] think that was beneficial for them to go back and see where they were recounting plot and where it was not a form of analysis... I think that was just a good motivator for them to understand the difference between here I'm telling what Tom experiences, but here I'm actually analysing and using evidence (Anita)*

One aspect of the genre model that Anita mentioned as having used was cohesive links. She described how, while modelling a paragraph, she included drawing students' attention to the need for cohesive ties.

> *making sure that they're linking within. So we did a paragraph. Before they go on to the next kind of example to support, they needed to have some kind of link and between paragraphs, yeah, between paragraphs as well, so cohesive ties. (Anita)*

Barbara reported using a more overt approach to teaching how to present the argument in the essay. She reported teaching her students to use a model proposed by Schaffer (2002). This is a paragraph-writing strategy using thinking prompts to structure a paragraph using a mixture of assertion, evidence, commentary and cohesive ties. The formula includes the use of topic and concluding sentences. The Schaffer model neatly packaged the analysis and the paragraph structure.

> *So three weeks before the end I guess where most of them had a full draft that I'd not looked at ... I taught the Schaffer model at that point, so they were trying to follow that and basically it was just the body paragraphs (Barbara)*

Rather than a generic explanation of how to write argument, Charles reported that he used modelling by distributing a successful student essay and extra drafting practice. In addition, the paragraph topic and sentence guide already mentioned were powerful models of how to construct the argument. The second essay he referred to in this extract is the assignment, Essay 2.

> *Students did spend two lessons writing a practice. This was corrected and a successful student example was copied for all students. I believe this practice and the student model were critical in the students' refining of their understanding of the task ... Students then handed in a complete draft of the essay to be marked (or as much as they had written) on which I commented and corrected - but not copiously as they were already in possession of the advised structure. (Charles)*

Douglas said he used the students' prior knowledge of a paragraph structuring strategy, known as "T-E-E-L" and then used extensive modelling to teach the analysis. The "T-E-E-L" model is specifically recommended on the task sheet. (Appendix D)

> *as far as the construction of the paragraphs went, they seemed to all remember the T-E-E-L structure, the topic sentence, explain, expand, and link to the next paragraph (Douglas)*

> *Then I would literally put it on the board in front of them. I'd write down some general topic sentence and I'd get them to agree or challenge me that this was in fact a reasonable topic sentence. And then I would start to make an assertion followed by evidence but I'd often meld those two sentences together so that I had a quote which I'd prepared beforehand (Douglas)*

The data suggests that all the teachers emphasised the need for the presentation of a detailed argument in this paragraph-level teaching as well as in the teaching of the overall structure. The interviews reported that all the students had paragraphs at the expected level of detail modelled for them, or at least access to a "successful student example" (Charles) at the desirable level. Students should have been in no doubt that they were expected to write a detailed argument supported by evidence. This understanding may have led students from all classes to present a much more detailed essay in Essay 2 than they had written for Essay 1, in which the content and the detail of the argument were more briefly considered. A more detailed and precise argument can call upon syntax that requires, for example, more adjectives and adverbs to add detail and precision. As discussed in Chapter 4, the Coh-Metrix data shows that Classes B and D increased mean adjective incidence, and all classes increased mean adverb incidence from Essay 1 to Essay 2. These increases have increased lexical density across the two essays and may reflect the teaching emphasis that all the teachers gave to the importance of a detailed argument in Essay 2.

5.3.1 Teaching at sentence-level: Teaching embedded quotations

An important part of the expository essay genre is to use evidence to back the assertions that make up the defence of the thesis (Schleppegrell, 2001, p. 435). This expectation was emphasised in the students' task sheet. (See Appendix D.) All the teachers seem to have considered this unit an opportunity to show students how to use quotations as evidence, and to embed them skilfully within sentences. Some teachers seem to have considered this a new skill for the students; others seem to have treated it as prior knowledge.

Anita reported that she emphasised two aspects of embedding quotations: integration of the quotations into the students' own sentences, and using phrases starting with a participle to avoid repetition.

> *Integration of quotes so that they're not just plonking a quote in without embedding them properly into their sentences (Anita)*

> *I taught them a* couple *of things about ... getting rid of "This quote shows that" and using "I-N-G" participles . So "showing that" instead of "This quote shows that". (Anita)*

Barbara mentioned her opinion that students usually learn embedding quotations quickly from a demonstration. She reported using just a short demonstration of how to do it.

> *Just the regular old, this is how you embed a quotation. And they try to, you know, I don't want any of the "He said, quote" and I showed them some examples of what that looked like. They always pick it up quickly. (Barbara)*

Charles said that he gave his students a guide to follow.

> *At the end, just before the submission, I sent them the note on how to incorporate quotations into the essay. (Charles) (The note referred to is in Appendix C.)*

Douglas reported that he modelled embedding quotations as he taught how to write the analysis in the paragraphs, and explicitly discussed how to do it.

> *Well I took the approach that a lot of them had never actually seen in front of them what I was talking about in terms of integrating quotes, so I would get them through class discussion to agree on a point about a character, or some emotional development, anything that they could all agree, yes, this happened.*

And I would show them something directly. Look. See how I've managed to either separate the quote with commas but run it into the middle of the sentence or not bother with commas because the words that preceded it meant that the quote could then make sense of what I'd constructed in the beginning as a sentence. And I said, "Look I haven't done the colon and the ... Let's put a full quote, full sentence by itself. Look, I've cherry-picked a few words here and I've integrated another phrase there, and I've made it fit into the... Does everyone agree that, see how I've actually made my own words fit the quote so that as a whole it makes a sentence? (Douglas)

Thus, according to their teachers' reports, all students were shown how to embed quotations, albeit in different ways and with different levels of explicitness, and this may also have had an effect on the overall increase in lexical density. For example, Anita taught her class to replace "*This quote shows that"* by "*showing that*" and continuing the sentence. Where this strategy was implemented, it would have had an effect of increasing the lexical density a little and would have contributed to the overall increase.

5.3.2 Teaching at sentence level: Drafting as a learning strategy

Although this theme has been included as at the sentence level, drafting covers all levels. It has been included here because Anita and Barbara record having focussed so much of their attention on the sentence level during their drafting lessons. Drafting is an important part of the teaching/ learning process for writing, especially as it allows teachers to give targeted feedback on what students do not yet understand about a task. All classes used some class time to work on drafts with the opportunity to consult the teacher individually. Both Anita and Barbara said that they

directed their students to consider the sentence level and the new strategies that were taught. I begin this discussion with Anita's data.

> *So I took them to the computer room as part of their drafting. So I had run through the sentence strategies; we'd done some examples in class, and the next lesson I booked them into the computer room, ... then I said to them "OK one of the ways to improve ... is to go through your sentences and use these strategies that I'd outlined on the board" (Anita)*

By reminding her students to use the intervention strategies to improve succinctness, Anita has encouraged her students to increase lexical density. Barbara's use of drafting also may have contributed to her students' increase in lexical density in Essay 2. Barbara recorded spending more time than the other classes on in-class drafting.

> *I had a good two weeks extra to work with the draft (Barbara)*

She related how she attempted to tap into the students' motivation to do well in the assignment to get them to practice some sentence-level writing skills in the way she introduced the students to the re-drafting process.

> *because I started the lesson with an idea of, you know how you get your papers back and it says you should have fixed this and you should have done this better and you did this right and this right? And you always look at those things that you didn't do well. Your response is, "Well I don't know how to fix that."... So it was sort of getting them on side, going, "I'm going to show you some tricks on how to fix those things" (Barbara)*

These "tricks" were a range of polishing strategies that Barbara presented to her students who then spent a week "honing their essays" (Barbara) after she had spent a week on strategies covering

sentence beginnings, combining sentences, a bit of vocabulary (Barbara)

The drafting strategies Barbara taught her class may have had an effect on the class mean lexical density in Essay 2. One interesting Coh-Metrix statistic shows that Class B/I increased the mean number of adjectives by 22 between Essays 1 and 2 to reach a mean for this element of 82, compared to the other classes' scores of 70, 67 and 65. Class B/I also had the highest mean adverb incidence at 59 compared to means around 50 for the other classes. Both of these increases have contributed to the mean increase in lexical density for Class B/I and suggest that in these redrafting sessions, students applied strategies that resulted in using more adjectives and adverbs. Myhill's (2008) developmental continuum would characterise this change as moving from poor to average writing for Years 8 – 10 students.

A further factor in increasing lexical density for these students may be simply the extra time the students spent on the in-class drafting which meant that the students who would not normally spend a lot of time on redrafting an assignment did so because they were encouraged to do it in class. Barbara's assessment of the difference that the time in class to draft made was

> *because I think if you just would have taught it* [the strategies], *if I'd just taught it and left it, we might have had the top three percent, five percent maybe that would have done it, based on the kids. Just knowing the kids (Barbara*)

When Charles and Douglas used drafting, their emphasis was on the whole-text and paragraph level. Charles recorded giving written feedback on his students' work.

> *Students then handed in a complete draft of the essay to be marked (or as much as they had written) on which I commented and corrected - but not copiously as they were already in possession of the advised structure. (Charles)*

Charles' framing of his feedback as not needing copious feedback because students were "already in possession of the advised structure" suggests that, for him, getting the right structure in the essay was an important teaching point.

Douglas recorded taking the opportunity of the drafting lessons to help the students who were struggling with the task; he recorded having given written feedback to the more able students who submitted drafts for feedback.

> *getting kids to have a bash at it themselves, and then sitting down and helping them with rough copies either while they were doing it or after they'd done it. Lots of individual one- to-one stuff (Douglas)*

His comments about the drafting process he used focus on essay structure, analysis and use of quotations, a choice which seems to indicate his priorities in the unit.

> *I had to really concentrate on getting them to knock out an essay which was structured properly and then after the fact I helped them to incorporate one or two paragraphs where they had a quote backing up an assertion.... About a third of the class produced some parts of the draft, which I then corrected and I didn't see the whole essay until they produced it and about a third gave me a full draft and I gave it back to them with as much feedback as they needed. (Douglas)*

The Coh-Metrix data for Class D/C shows that lexical density and left embeddedness means increased more for this class than for the other three classes. In the first essay, these means were lower than the other classes' means. In Essay 2, Class D/C's means were close to the means for the other classes. Class D/C has demonstrated poorer writing skills in Essay 1 than the other classes, and yet has equalled the other classes in these means in writing the assignment. This could be

due to a number of factors but one factor that is indicated in the qualitative data is that Douglas used discussion and modelling extensively in his teaching approach, and made a point of actively assisting the weakest students in the drafting process. These teaching approaches cannot be discounted as factors that may have contributed to the increase in lexical density and left embeddedness scores in this class. However, it is also pertinent to understanding the full picture to consider why the students' Essay 1 texts were so much weaker on the measures than those of students in the other classes, when their Essay 2 scores are comparable with those of the other classes. Unfortunately, this topic was not discussed during the interview.

5.3.3 Teaching at the sentence level: Teaching of sentence structure

The focus of the intervention was sentence-level strategies to improve succinctness. The two intervention teachers, Anita and Barbara, reported taking time to include some sentence-level strategies in their teaching. The control teachers reported that they could find no time for this level, having prioritised the whole text and especially the paragraph level, as set out above. As detailed in Chapter 3, the intervention teachers were asked to teach a set of strategies to enhance succinctness in the context of teaching the genre characteristics of the expository essay.

When Anita discussed her teaching of this aspect, she made a number of points about her approach.

I gave myself a week to teach sentences. (Anita)

She found that the students understood the grammatical metaphor/ nominalisation strategy easily. Like many Queensland secondary English teachers, she uses the term *nominalisation* to describe this aspect of grammatical metaphor.

I used some of their sentences from their draft practice to nominalise. The problem then became that they were trying to do it for all their sentences.... So then we would have go through and talk about ways to ... vary their sentence beginnings. So that was the only kind of issue I had in terms of the nominalisation. (Anita)

but in terms of in a more simple sentence identifying the verb nominalising it and that seemed to work best with "Tom's..."(Anita)

The ease with which Class A/I students understood and applied nominalisation and the emphasis the strategy received in the teaching could have been factors in the increased noun incidence in Essay 2 for this class. Class A/I was the only class to increase noun incidence in Essay 2. Classes B, C and D decreased noun incidence by 9, 8 and 18 respectively, while Class A/I increased by 19. (The number of nouns in a text may not decrease, but noun *incidence* decreases as writers use more lexical verbs, adjectives and adverbs as well as more grammatical words. This may have been the reason the other students decreased mean noun incidence as they wrote a more detailed text.) Anita, their teacher, remarked that in marking Essay 2

I did notice definitely the nominalisation to the point where in some of the cross marking, one of the teachers picked up, "All of their paragraphs begin the same way, you know, 'Tom's unwavering views'." (Anita)

However, Anita reported that the strategy of replacing clauses with extended noun phrases was not so readily learnt, although her students found using the strategy to frame a quotation was easy.

In terms of getting rid of unnecessary clauses, the main problem they had with their sentences was that they were using three sentences to say the same thing.

So they'd have a quote and then they'd start the next sentence with, "This quote shows that ..." So "showing that" instead of "This quote shows that". (Anita)

Anita recorded that she explicitly taught the students the importance of writing more succinctly, but found a lack of time to practise a hindrance. Here she particularly mentioned her experience in teaching students to change clauses to extended noun phrases, and concluded that she needed more time to do this properly. She added that many of her students did not fully understand this strategy.

How can we condense that? We did a little bit of that but not enough. They needed a bit more time to be taught exactly identifying words that are not needed. ... I lost them a little bit on the clauses in terms of unnecessary clauses because that was, it was more a case of, well we did a couple of sentences on the board. They could all see it once we fixed it up but a lot of them still were struggling with "OK I didn't recognise that you could have done that. To me it looked OK," and so that was a little bit harder for some of them. They just couldn't see how to condense it any further. (Anita)

Ineffective learning of this strategy could have contributed to the results of the intervention especially for the mean numbers of modifiers per noun phrase. This strategy was designed to help students achieve greater lexical density by using more noun phrases in place of dependent clauses. However, the Coh-Metrix statistics showed that, like the control classes students, the intervention students decreased their mean number of modifiers per noun phrase from Essay 1 to Essay 2, suggesting that there was not wide application of the strategy in the second essay.

Barbara recorded spending more time than Anita on the sentence level, but she said she covered a wider variety of strategies than Anita, who said she found time in

the week she scheduled for teaching at the sentence level for little more than the specific new strategies of the intervention.

> *I'm going to show you how to reduce words, and put sentences together, put ideas together, take out things that really don't matter and how to decide what doesn't matter. (Barbara)*

The strategies Barbara listed have the potential to contribute to increased lexical density from Essay 1 to Essay 2. Barbara reported that her strategy was to teach a new sentence-level skill and then have the students immediately apply it to their drafts.

> *So basically each lesson there would be a couple of points that I would be highlighting. I would show them examples on the board, using a lot of models that you sent, the ones you'd worked on. I really didn't go beyond that for most of it. I'd use those but I didn't give them the whole thing at once. I just gave whatever it is that we needed for that particular lesson so that if we were dealing with nominalisation, we would deal with, here's a sentence and I'd put it up on the computer and then I'd take my marker and whiteboard and play with it and turn it around, do things with it and then I'd say, "OK, now you need to go into your essay and I want three of these, four of these," arbitrary random number and then they would spend time working on that for the rest of the class and then next class something else. (Barbara)*

Here Barbara suggests that she encouraged her students to use nominalisation in three or four places in their Essay 2: Now *you need to go into your essay and I want three of these, four of these (Barbara).* This would have made only a marginal addition to increasing lexical density. This different emphasis may be the underlying

cause of Class B/I's decrease in noun incidence in Essay 2 in contrast to Class A/I's large increase discussed above.

Barbara said she used group work to attempt to ensure that students developed the skills she was teaching with practice, discussion and exposure to many examples.

> *They put a paragraph together in a group or they put a couple of sentences together in a group and then they'd pick a spokesperson and that person would read it out for the class. And we'd go around and we'd just listen to one per group but everyone would write one, and that's another thing that we did. So whatever the lesson was, it's everybody writes one and then you sit in a group and you look at each other's and then you decide which one to present to the class. We did some of that. (Barbara)*

The increases in Class B/I's mean adjective and adverb usage discussed above suggest that the group learning strategy Barbara described may have assisted many students to understand the strategies enough to apply them to their second essays.

Charles revealed he did not deal with the sentence level explicitly, although students were given a copy of a draft essay that was recommended as a good model of the whole text.

> *a successful student example was copied for all students (Charles)*

However,

> *There was so much to teach and explain there was no time for modelling or calling for sentences. (Charles)*

The Coh-Metrix data provide an interesting insight into the texts that Charles' students produced under these circumstances in which there was no particular focus on the sentence level. As discussed in Chapter 4, Class C/C increased their lexical

verb incidence from a mean much lower than the other Essay 1 means to a mean just below the means of the other classes. This suggests that Class C/C may have added detail to their second essay by increasing the number of clauses they wrote from Essay 1 to Essay 2. Part of the reason they used more clauses might be that the detailed guide they were given, (See Appendix C) which most students followed closely, subtly directed them down this path. In contrast to the guide the students followed to write Essay 1, the essay 2 guide was written with an emphasis on processes, using verbs. The guide Class C/C followed to write Essay 1 was couched in nouns. For example, the paragraph two instructions read:

> *In one paragraph, consider how the untrustworthy or treacherous setting of post-war Vienna (including the penicillin swindle of which Harry Lime was a party) helps the viewer understand the character relationships. (Analytical essay task, Appendix 4)*

Here, students are being asked to discuss "setting" and "character relationships", nouns. The Essay 2 guide was couched using more verbs:

> ***Sixth paragraph:*** *After Airhaven, before Batmunkh Gompa (BG)*
>
> - *Key changes in his responses before BG: see 147 NB and 194-195: both about being challenged by the realities of Municipal Darwinism; Tom forced into the heart of his personal conflict over MD*
> - *209: Tom moved by sight of BG*
> - *212/235: Tom shocked by Anti-Traction League's suggestion of destroying London*
> - *214/237: after his public outburst, now by himself, Tom is seized by worry that London might destroy BG*

- *232: Tom's outlook about Valentine and London after he sees Valentine murder Anna Fang*

  (Suggested structure of Mortal Engines response, Appendix 5)

Here, the guide suggests students discuss processes, using verbs, for example, how Tom is "being challenged", "forced", "shocked", "moved", "seized". In spite of the large increase in mean verb incidence, Class C/C still used the lowest mean lexical verb incidence in Essay 2, suggesting that they have written the fewest number of dependent clauses of the cohort. According to Myhill's (2008) study, this would indicate that Class C/C students are on average the most advanced writers in the cohort. This might be confirmed by their Essay 2 marks, although this is at best a very general guide to writing skill, given that the essays were all marked holistically, making the evaluation of the syntax used one of a large number of criteria. Charles revealed that

> *I sensed the students wanted to do well - and they did. There were 9 As - 2 A+, several mid-A essays. There are 26 in the class. (Charles)*

Of these nine, eight students are in the study, compared to the 3, 2 and 2 students in Classes A, B and D respectively, whose Essay 2 was marked at A level.

Like Charles, Douglas's interview suggests that he did not teach at the sentence level explicitly, although it could be argued that he modelled sentences extensively as he wrote model paragraphs on the whiteboard. However, this appears to have been done without explicit discussion of any sentence-level aspects beyond the embedding of quotations, as shown above. He explained his priorities:

> *I'm forced, I feel, to deal, just deal with the big picture issues, essay structures, introducing a new skill... I don't do the sentence as such very well because I always feel I'm battling just to get the macro things done. (Douglas)*

The data above reveals that the four teachers' teaching strategies and emphases clearly differed at the sentence level, with only Anita and Barbara addressing it explicitly. That the comparison of change in lexical density across the control and intervention groups showed no statistical significance suggests that the strategies and emphases in common across the four classes are key to producing the changes in lexical density shown in the data. Thus, the emphasis on presenting a detailed argument supported by evidence as discussed in Section 5.2.2 above may have been a key factor in producing the increased lexical density shown between Essay 1 and Essay 2.

A further issue arising from the data is the lack of change in left embeddedness across the essays, except for a change which approaches significance for Class D/C. However, the small size of the group (N = 12) in Class D/C makes this result unreliable. The Coh-Metrix measure used, SYNLE, left embeddedness, is calculated as the mean number of words before the main verb. This measure was included in the study to investigate whether it shed any light on the overall development of the students' writing skills over the period of the English unit. That it changed very little across the two essays is not surprising when the teaching strategies are considered. Only Anita and Barbara mention that they taught anything that might have led students to increase the mean number of words before the main verb. Anita mentions that she had to *talk about ways to ... vary their sentence beginnings (Anita)* when her class over-used the nominalisation strategy. Barbara mentioned *we were talking about starting a sentence with a gerund, and I-N-G word (Barbara).* In both cases, these were strategies among a number of others, and may not have made enough difference to register a statistically significant change. While left embeddedness

increases as writers' skills increase and they write more complex texts, this development takes place more slowly than in the few weeks of this study.

5.3.4 Teaching at sentence-level: Use of grammar terms

As discussed in Chapter 3, teachers were asked to use a contextualised grammar teaching using the model proposed by Myhill, Jones et al. (2012), and it was expected that the teachers would implement the approach according to their assessments of what would suit their students. The different teaching approaches Anita and Barbara described in their approaches to teaching drafting and the sentence level, set out above in 5.3.2 and 5.3.3, illustrate that these two teachers have applied the guidelines to the intervention according to their individual judgements about what would be effective with their particular students. This flexibility is also evident in Anita and Barbara's discussion of how they used grammar terms. One key aspect of the model was to use grammar as a meta-language to talk about how sentences make meaning in the context of teaching writing. The teachers appear to have continued to use the mixture of traditional grammar terms and Systemic Functional Grammar concepts that is common in Queensland high schools. This usage follows the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) syllabus (Exley & Mills, 2012, p. 194), which was the basis of the work program the teachers were following.

Anita's use of the grammar terms to discuss the writing strategies with her students, just as Myhill, Jones, et al. (2012) recommended, is implied in her use of the grammar terms in her discussion of her teaching for the unit.

> *Not just nominalisation and unnecessary clauses but as I said to you before getting rid of simple sentences, combining sentences to form compound and complex sentences.*

Barbara recorded using the terms sometimes, but at other times using what she described as

words they could understand instead of using, you know, the proper English.

Asked about her use of grammar terms, she replied

I didn't really. I guess a couple of times I told them: this is the term, but you don't need to remember the term. You just need to remember to use this. So for example when we were talking about starting a sentence with a gerund, an I-N-G word, I would say. It's a gerund. It's called a gerund. That's the formal language and when you get to 11 and 12 they're going to say "gerund" and they're going to expect that you'll remember what that is, (even though that may or may not be true,) but um for now we just need you to remember it's an I-N-G word so I'm not going it's a verb, I'm not using any of that, so it's very simplistic, very primary school, but it worked for them because it's something they can remember. (Barbara)

The data suggests that Barbara used grammatical concepts in context to teach writing, but did not always use the standard traditional grammar terminology.

5.4.1 Teacher evaluations of intervention strategies: Teacher evaluation of the efficacy of the strategies

Both Anita and Barbara said they found the intervention strategies useful for their students, primarily because teaching them raised their students' awareness of improving the sentence level.

So that was a good strategy to get them thinking about ways that they can condense their words. (Anita)

I think the main positive was that they were just more aware of sentences and that they were analysing them ... so overall, it's positive, a positive experience (Anita)

Anita said she felt that the students' assignment marks had improved in some cases due to the sentence-level teaching.

So I had a few kids who improved, most probably remained about the same, and I don't think any, I don't think any of them did noticeably worse. (Anita)

Anita claimed that the more able students in her class had learnt the new strategies more quickly, and that, as mentioned above, some students did not understand the strategy of changing dependent clauses to noun phrases.

I definitely noticed an improvement in those kids who are more skilled and were more able to acquire the strategies and those who are particularly conscious about the word count and condensing those words. I think it benefitted those more so.

A further evaluation offered was that being involved in the study had raised Anita's consciousness about teaching at the sentence level.

I'm pleased that you brought it to me because it made me be more conscious about, about teaching writing skills. (Anita)

Despite Anita's impression that the more able students adopted the new strategies, the correlation analysis reported in Chapter 4 showed no relationship between the number of dependent clauses in Essay 1 and change in lexical density between Essay 1 and Essay 2. The theory underlying the intervention was that the strategy of changing dependent clauses to extended noun phrases would lead to increased lexical density. However, while lexical density increased, the mean

numbers of modifiers per noun phrase decreased, showing that the mechanism for the increase in lexical density was not an expansion of extended noun phrase usage. These data also suggest that, as discussed above, the students did not apply this strategy to their second essays, and this is consistent with Anita's report on the difficulty her students experienced with this strategy.

I lost them a little bit on the clauses in terms of unnecessary clauses because that was, it was more a case of, well we did a couple of sentences on the board. They could all see it once we fixed it up but a lot of them still were struggling with "OK I didn't recognise that you could have done that. To me it looked OK." (Anita)

This makes the connection between dependent clause usage and change in lexical density more tenuous for these texts, and so it is not surprising that the correlation analysis did not find a link.

Barbara's evaluation of the strategies was that her students benefitted because they understood more about how to put themselves in charge of their writing.

> *it empowered the kids and that was huge because they don't feel like, you know, Mrs [B] taught A, B C and D and I've done those, and I got a C. How come I got a C? (Barbara)*
>
> *It's a .. suddenly it's not just a 'I get this mark and I'm not sure how I got it and I'm not sure how you fix it' and 'Oh I got a C again.' Because a lot of the grades, a lot of their grades went up in terms of the writing style. (Barbara)*
>
> *So the strategies that you gave us forced them to look at every single line and in some cases every single word in every single line. (Barbara)*

Most important, she mentioned, was the empowerment that the experience had given to her students in having them understand that they could change their writing.

They came out of it self-aware that they could change their writing and they could change it to make it better. And they could see it was better. Where before they didn't even know it was bad. (Barbara)

Barbara also said she found the intervention useful to her as professional development because of the new strategies she had not tried before.

And there were a couple of things you gave us that we don't normally teach at all at this level, nominalisation, for example.... Nines don't learn that. At least, not that I've seen since I've been here. It's not ever been discussed before in the staffroom, never heard any other teacher talk about using it. I've heard it used in 12 but not in 9. (Barbara)

Thus, while the statistical evaluation has been unable to show any statistically significant differences in student writing outcomes for the intervention, it is possible that a start has been made towards more awareness of and attention to the sentence level for these two classes and their teachers, which may affect student writing skills in the longer term.

5.4.2 Teachers' evaluations of intervention strategies: Evaluation of long-term learning of strategies

Introducing a new strategy may contribute to students' development as writers, but it must be recognized that writing development takes place slowly. There is always the search for a "quick fix" but writing teachers rarely find one. Both Anita and Barbara expressed concern that the intervention had been so hurried that it was unlikely to produce long-term learning.

Just to be a strategy that's more helpful in the long term, not just for this one particular assignment because I can guarantee that they won't be able to. .. I

don't think that they could recall and use those strategies now. I think that they would have forgotten. (Anita)

Anita linked concern for a lack of long-term learning in this instance with the pattern of focus on the current piece of assessment she sees in the students' learning behaviour.

I think the problem is we're so task –focussed that they put all their energy into this one assignment and then as soon as it's submitted they forget everything that they learned and you have to reteach it over and over and over again. ... It's not something that you can teach once and then they'll remember. (Anita)

Barbara also expressed concern for her students' long-term learning.

We need more time on practice so that it becomes part of them rather than a lesson. It was great and they could see the value in it and I could see the value in it but part of me goes, "Where are they going to remember it when they've got a different teacher in front of them a year down the road?" You can't do a one or one-off thing; it's not going to hold. (Barbara)

5.5 Issues raised by teachers: Time

All of the teachers mentioned time as a constraint, especially as a constraint on teaching at the sentence level. Learning new ways of expressing ideas effectively in writing can be time-consuming and there are always many other areas of learning that also need attention in every unit of work. All the teachers recorded experiencing the need to juggle priorities in order to maximize their students' learning.

I would have liked to have had more time to teach, to do it justice. (Anita)

The main issue that arose was the time factor. (Anita)

I think that's something that a lot of people overlook, whether it's time; teaching writing is often the one that you put to the back, just to get through the content and get through the structure. (Anita)

We just need more time. We need more time on practice so that it becomes part of them rather than a lesson. (Barbara)

As discussed above, the statistical analysis showed no statistically significant difference between outcomes for the control and intervention classes. The intervention teachers judged that a lack of time to learn the strategies influenced the students' learning. This lack of time may have been a factor in the outcomes of the intervention. However, recall that the study compared the changes in lexical density and syntactic complexity across two essays, one written as a timed one-draft essay and the second as an untimed assignment. This design allowed for measurement of changes resulting from using strategies that were consciously applied in a re-drafting situation. There was no need for students to have learnt to apply the strategies automatically, which would represent a further development in writing skills, to be attained after considerable deliberate application of the strategies. Thus the study suggests that many of the students have not applied the strategies consciously in a re-drafting situation, not that they have not achieved significant development as a result of a short intervention.

A relevant comparison can be made with the duration of the intervention and the duration of the study done by Myhill, Jones et al. (2012). The study by Myhill, Jones, et al., which showed positive improvements in writing outcomes due to the use of this approach, took place over a school year and included three units lasting three weeks each over the year. With a duration of at most two weeks, the current

intervention may have been, as the teachers noted, too short to make a difference to the measured outcomes.

Like the intervention teachers, the control teachers mentioned time as a limiting factor in what choices of teaching strategies were feasible.

> *I did not model sentences on the board; I did not have time. ...There was so much to teach and explain there was no time for modelling or calling for sentences. (Charles)*

> *The time schedule we were on meant that I thought it best to stick to that which we'd agreed that they'd all been taught before ... what I thought were effective, time-effective lessons. (Douglas)*

5.6 Conclusion

This chapter has presented data about the approaches the teachers took to the teaching of the writing task, and about their evaluations of the strategies used. As shown in Chapter 4, the mean lexical density of both control and intervention classes increased between the first draft Essay 1 and the polished assignment Essay 2. The factors in the teaching strategies and approaches that appear to be at work in this result are the combination of ways in which students came to understand that they needed to write in more detail for the assignment than for the draft essay. The teaching of essay structure, paragraph structure and analysis may have varied in strategy and emphasis but in every class, teachers reported giving a clear message that the essay needed a detailed argument supported by evidence, preferably in the form of quotations from the novel. The data show all classes received assistance including with planning and drafting to show students some of the ways to produce this detailed argument and this may have been a major influence on the change in

lexical density between Essay 1 and Essay 2. In the intervention classes, the data show that students received extra teaching about some ways to write a more succinct argument at the sentence level. However, the study has not demonstrated the effectiveness of the sentence-level teaching strategies; the intervention teachers' remarks suggest that this may have been influenced by the inadequate time given to instruction in the strategy to change dependent clauses to extended noun phrases. This has implications for practice which will be discussed in Chapter 6.

Chapter 6: Discussion, contributions and implications

6.1 Introduction

This chapter contains discussion, interpretation and evaluation of the results presented in Chapters 4 and 5 with reference to the theoretical and empirical literature. The chapter will begin in Section 6.1 with a brief review of the goals, design and methodology of the study. Section 6.2 will focus on Research Questions 1 and 2 and will present reflections on what light was shed on Research Questions 1 and 2 by the results regarding the mean number of modifiers per noun phrase (Section 6.2.1), syntactic complexity (Section 6.2.2) and lexical density (Section 6.2.3). Section 6.3 contains a discussion of what was shown by the correlation analysis of possible links between the students' use of dependent clauses and the changes in lexical density between Essay 1 and Essay 2. This will address Research Question 3. Section 6.4 will consider Research Question 4. This section will reflect on how the teachers' teaching approaches may have related to the results regarding the mean number of modifiers per noun phrase, left embeddedness and lexical density. Section 6.5 will discuss contributions to knowledge of the study, with Section 6.5.1 discussing contributions to knowledge regarding explicit teaching at the sentence level within the genre model in Australia; Section 6.5.2 discussing contribution to knowledge about contextualised grammar pedagogy in Australia; and Section 6.5.3 discussing contribution to methodology of using the Coh-Metrix computer tool in studying adolescent writing development. Section 6.6 will present implications for practice including the further use of the Coh-Metrix tool (Section 6.6.1). Section 6.6.2 will present implications for changes to practice at the school where the study was conducted. Recommendations will follow in Section 6.7. The

chapter will conclude with a discussion of the limitations of the study (Section 6.8), and reflections on directions for future research (Section 6.9).

The study's goals, design and methodology focussed on adolescents' writing development. The goals were to examine some sentence-level elements of adolescent writing development and a sentence-level teaching approach for secondary school students. The study used a mixed-methods design that combined quasi-experimental and interpretivist methodology. Control and intervention classes were used to probe the efficacy of a contextualised grammar approach to teaching Year 9 students strategies to write more succinctly in expository essays. Teachers in all four classes taught the same English unit that focussed on a novel and an expository essay. The intervention teachers added instruction in some sentence-level strategies. The Coh-Metrix computer analysis tool was used to examine two essays written under different conditions: Essay 1 was a one-draft essay written in class in approximately 60 minutes; Essay 2 was a polished assignment that was supported by in-class drafting and teacher feedback but was produced mainly in out-of-class time. Teachers of all four classes were interviewed regarding their teaching approaches in the unit.

Analysis of the data followed. The analysis of the student texts sought to probe changes in lexical density and syntactic complexity, while the analysis of the interview data focussed on understanding teaching approaches across the four classes. Three Coh-Metrix-based measures were used to analyse the student texts: lexical density, left embeddedness and mean number of modifiers per noun phrase. Lexical density was used to measure changes in succinctness. Left embeddedness and mean number of modifiers per noun phrase are measures of syntactic complexity and were used to monitor evidence of development in writing style, since increases

in syntactic complexity have been associated with increases in teacher judgements of essay quality (Beers & Nagy, 2009; McNamara et al., 2010). It will be recalled from Chapter 2 that increases in mean number of modifiers per noun phrase have also been shown to be a developmental marker for writer development by Myhill (2008), Ravid and Berman (2010), Crossley et al. (2011), Hunt (1970) and Loban (1976). The interview data gathered from the four teachers were analysed thematically following inductive thematic analysis protocols recommended by Braun and Clarke (2006).

The study sheds some light on the syntax the Year 9 students in this study used in different writing contexts and the influence that teaching approaches may have had on the production of an expository essay written in assignment conditions. The analysis of the texts found that lexical density increased from the first draft essay to the polished assignment, while the measures of syntactic complexity remained the same or decreased. No statistically significant differences were found between control and intervention classes, showing that the contextualised grammar teaching strategies used to teach the students to use sentence-level strategies to increase succinctness were ineffective in increasing lexical density beyond normal performance. Measures of syntactic complexity did not increase, showing that, on average, students did not demonstrate any development as writers in this important syntactic area over the six-week unit of work. Furthermore, the sophistication of syntax in the polished essays did not improve significantly during the students' redrafting processes. No link could be established between change in lexical density between Essay 1 and Essay 2 and students' writing development as judged by their use of dependent clauses. Analysis of teacher interview data showed that all teachers reported emphasising the need for a detailed argument supported by evidence. This

common emphasis may have been a factor in the increase in lexical density in students' essays from draft to polished assignment across both control and intervention groups.

6.2. Discussion of Research Questions 1 and 2

This study investigated this question.

- To what extent does an intervention using Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy improve secondary students' writing?

The question was operationalized by four research questions. The first two of these questions were:

Research Question 1: Do lexical density, left embeddedness and the mean number of modifiers per noun phrase change from Essay 1, which is a first draft, to Essay 2, which is a polished assignment?

Research Question 2: Are these changes the same for the intervention group and the control group?

Research Questions 1 and 2 are discussed together in the following sections. Consideration of Research Question 1 is the starting point of the investigation of the differences between the two essays written in different circumstances. Research Question 2 considers how the intervention of the study may have affected the texts written. The two questions are considered together to provide a holistic discussion of the differences between the first draft and polished styles of the students' texts as students responded to teaching approaches that used different approaches to explicit teaching at the sentence level.

6.2.1 Discussion of results regarding mean number of modifiers per noun phrase

The study examined the changes between Essay 1 and Essay 2 in the students' mean number of modifiers per noun phrase. One strategy that intervention students were taught encouraged them to use fewer clauses and more extended noun phrases. The strategy had two interlinked purposes: firstly to encourage development as a writer, and secondly to teach skills in an area of key importance in a major academic genre. Using fewer clauses and more extended noun phrases is a developmental marker for writer maturity. As discussed in Chapter 2, studies by Myhill (2008), Ravid and Berman (2010), Crossley et al. (2011), Hunt (1970) and Loban (1976) showed that as adolescent writers mature, they use fewer dependent clauses and more noun phrases; in addition, they lengthen their noun phrases, that is, use more modifiers. Thus this measure probed for evidence of development of the syntactic element of writing development in response to the intervention. The second purpose targeted the noun phrase as a key element of the expository essay genre and of academic language in general. Biber and Gray (2010) and Fang et al. (2006), found that the use of extended noun phrases is an important characteristic of academic writing and a useful way to create a clear chain of reasoning in expository genres. Scholars such as Schleppegrell (2001) and Berman and Nir-Sagiv (2004) emphasised that skilled control of the expository essay genre is essential for school success. Thus this measure examined the efficacy of the strategy learning in developing skill in a key aspect of a writing genre that makes an important contribution to academic success. While strategy instruction has been shown to be an effective way to improve student writing skills (Graham & Perin, 2007b, p. 317), no study that targeted skills in using the extended noun phrase was identified in the literature review.

The Coh-Metrix data on mean number of modifiers per noun phrase showed that students in both control and intervention groups used fewer modifiers in their polished assignments than in their first draft essays. For the control classes who had not learned the strategies, the decrease was at a statistically significant level. Since, as discussed above, increasing use of modifiers in noun phrases is a marker of development, this decrease shows that, on average, students have not demonstrated progress in this aspect of their writing skills in the approximately six weeks between writing Essay 1 and Essay 2. Clearly, the teaching strategies used in the intervention classes have not produced measurable development in this aspect of the students' syntactic repertoires. Nor has this development occurred as an indirect result of the writing activities in the control classes. In fact, in the control classes, the activities of the classes and the conditions of writing the assignment have combined to create the impression that students' polished writing is less sophisticated than Essay 1, a one-draft essay, suggests they are capable of writing.

6.2.2 Discussion of results regarding left embeddedness

The study examined students' change in left embeddedness between Essay 1 and Essay 2 in order to examine changes to the syntactic complexity of students' sentences in the two different writing situations of draft and polished essay. An important goal was to monitor effects of learning the strategies on overall writing style. Left embeddedness and the mean number of modifiers per noun phrase are both measures of syntactic complexity (McNamara et al., 2014, p. 70), which is an important marker of quality in writing. Beers and Nagy (2009) found that syntactic complexity was positively correlated with teacher assessments of the quality of essays written by Year 8 students. McNamara et al. (2010) found that syntactic complexity was one of the three most predictive features for teacher judgements of

quality in essays written by first year university students. Myhill (2008) showed that increasing syntactic complexity by greater use of non-finite clauses and adverbials to begin sentences is a marker of development at the sentence level for adolescent students. Thus, teachers looking to assist adolescent students to enhance their writing development should be aware that increased syntactic complexity correlates strongly with progress towards mature writing skills.

Although the intervention did not include any strategies that were specifically designed to increase left embeddedness, the possibility existed that the adoption of the strategy to change dependent clauses to extended noun phrases might have had an effect on this measure. This would have occurred, for example, had students used many more extended noun phrases to qualify the subjects of their main verbs. As discussed above, however, the students did not adopt the extended noun phrase strategy to a degree visible in the statistical results, so no conclusion can be reached about whether adoption of the strategy had an effect on syntactic complexity.

The data did reveal that another writing strategy often taught, that of beginning sentences with participial phrases, also had little effect on increasing overall syntactic complexity. Since left embeddedness is measured by Coh-Metrix as the mean number of words before the main verb, beginning sentences with participial phrases before the subject of the main verb increases left embeddedness. The interview data suggested that both the intervention teachers reminded their students about using participial phrases as a way to vary sentence beginnings, although this was not one of the targeted strategies of the intervention. The analysis showed no statistically significant change in left embeddedness across the two essays by either control or intervention groups. Students did not significantly change their writing style in this respect from draft essay to polished assignment, even though attention to

how sentences begin might be expected to be a part of a writer's routine in polishing an assignment. While it may have had a positive effect on writing style, changing a few sentence beginnings did not significantly improve syntactic complexity.

6.2.3 Discussion of results regarding lexical density

The data showed that mean lexical density of the students' expository essay texts in a polished assignment was greater than the mean lexical density of first draft texts. The research design proposed that this increased lexical density would be created by the students' using more extended noun phrases and fewer clauses. However, as discussed above, in both groups, students' mean number of modifiers per noun phrase decreased, showing that students did not use longer noun phrases overall in Essay 2. Examination of the data of each of the four classes showed that change in each class's mean lexical density was due to different sets of changes in the constituent elements of lexical density (nouns, lexical verbs, adjectives and adverbs) which may have been related to different teaching emphases in each class. All of the classes increased adverb incidence, and two of the classes, one intervention class and one control class, increased adjective incidence.

Applying Myhill's (2008, p. 285) model of linguistic development of the sentence for secondary students to the adjective and adverb data suggests that, in this aspect of syntax, these students are average writers for their age group. Myhill's (2008) model shows a movement towards more use of adjectives and adverbs for expansion of ideas as students move from weak to average writers. This is followed by a decrease in adjective and adverb usage as young writers use a wider range of syntax as they become more skilled. That many students have responded to the need to provide more detail by increasing their incidence of adjective and adverbs in Essay

2 suggests that syntactically, many of these students are performing at what Myhill (2008) defined as an average level for students between Years 8 and 10.

This assessment pinpoints an element of writing skills where achievement lags for this group of students. As discussed in Chapter 1, the 2013 NAPLAN (Australian Curriculum, Assessment and Reporting Authority, 2013) data for writing place this school's students as more advanced than the whole Queensland Year 9 cohort. The NAPLAN data give a global assessment in which syntax is only one of a range of measures of writing skill. The finer-grained Coh-Metrix data on syntax suggest that, for these students, performance in this area of syntax is average rather than above-average.

Along with investigation into the ways in which students produced greater lexical density in their assignments, the study examined whether teaching some sentence-level strategies affected lexical density of the subsequent essay using a comparison of control and intervention classes. This comparison showed no difference at a statistically significant level in change in lexical density between Essay 1 and Essay 2 for the two groups. Although students in the intervention classes were taught strategies to increase succinctness, and therefore increase lexical density, the data show that teaching the strategies made no clear difference to the lexical density of the intervention students' Essay 2. As discussed above, the Coh-Metrix data on the mean number of modifiers per noun phrase showed that, overall, intervention students did not implement the strategy to change dependent clauses to noun phrases. The qualitative data suggest that this strategy was not well understood by the students. Anita reported that her class needed more time to really understand the strategy and the quantitative data confirmed that the intervention classes decreased their mean number of modifiers per noun phrase. A tentative conclusion

from this short trial is that the strategy is complex and may need extended time and practice before its effects are evident in students' writing, even when students have the opportunity to apply it consciously to a draft they are polishing. It is also possible that students needed a more advanced level of syntactic development to be able to incorporate the use of this syntax into their existing writing repertoires.

6.3 Results regarding a possible link between students' initial use of dependent clauses and the change in lexical density between Essay 1 and Essay 2. (Research Question 3)

In addition to investigating changes to lexical density, mean number of modifiers per noun phrase and left embeddedness, the study considered how students at different levels of syntactic development responded to learning the intervention strategies. Research Question 3 focussed on this aspect.

Research Question 3: For the intervention group, can the number of dependent clause structures used in Essay 1 be related to changes in lexical density from Essay 1 to Essay 2?

This question sought to probe the relationship between students' position on the continuum of sentence-level development as defined by Myhill (2008) and their use of the strategies to increase succinctness in Essay 2. Myhill's (2008) continuum proposed that as early secondary students' writing skills mature, there is a shift from using many dependent clauses to using fewer dependent clauses and more extended noun phrases. Using this shift to define the more and the less able writers in the group, the question sought to identify if teaching the strategies benefitted students at all levels of writing skill. The analysis did not identify any trend. The Coh-Metrix data on the change in mean number of modifiers per noun phrase show that students in the intervention classes decreased their mean number of modifiers per noun phrase, suggesting that overall students have not applied the strategy to change

dependent clauses to noun phrases to any great extent. Furthermore, lexical density has increased, but not due to applying the strategy. Thus it is not possible to use the data on change in lexical density to probe understanding of which students benefitted from learning the strategy.

6.4 Possible influence of variations in teaching strategies across the four classes and changes discussed in Research Questions 1 and 2. (Research Question 4)

A further area of investigation in the study was whether any links could be identified between the data relating to lexical density and syntactic complexity and the teachers' teaching approaches. Research Question 4 focussed on this area.

Research Question 4: Can the variations in teaching strategies across the four classes be related to changes discussed in Research Questions 1 and 2?

This question sought to relate the qualitative data about the four teachers' teaching approaches and the quantitative data regarding lexical density and syntactic complexity. What relationships between variations in the teachers' teaching approaches and variations in the students' texts can be proposed? Both sets of data show substantial commonality amongst the teaching approaches and the students' performances. The teaching approaches described showed a shared understanding of the expository essay genre among the four teachers. Key aspects of the genre were highlighted. For example, all teachers reported teaching their students about the importance of the generic features of overall structure, paragraph structure and topic sentences, as Humphrey et al. (2011, p 12) set out. Schleppegrell (2001, p 435) emphasised that a key generic feature of the expository essay is that it contains an argument supported by evidence, and this aspect, too, is clearly evident in the teachers' reports about their approaches. All the teachers reported placing great emphasis on showing students how to write an argument supported by evidence,

especially using quotations from the novel to support assertions. This suggests that it was made clear to students that a detailed argument was required and, as discussed above, this emphasis may have been a factor in assignment syntax that used more adjectives and adverbs than the first draft essay syntax.

In spite of great similarities reported in teaching emphases among the teachers, variations among the teaching approaches were also reported. A key variation was that the intervention teachers taught explicit sentence-level strategies to increase succinctness. There are some suggestions in the data that this may have produced variations amongst the student texts. For example Anita reported that her students applied nominalisation so enthusiastically that she had to suggest that, to avoid monotony, students vary their sentence beginnings.

The problem then became that they were trying to do it for all their sentences and so all of the sentences beginnings were starting "Tom/ Tom/ Tom/ Tom". So then we would have go through and talk about ways to ummm yeah, vary their sentence beginnings (Anita)

In this class, (Class A/I), the student texts for Essay 2 showed an unusually high incidence of noun usage compared to Essay 2 texts written by the students in the other classes. However, overall, this is a minor difference and the interview data suggest that the quite similar quantitative results in Essay 2 are probably related to the similarity of the four teachers' teaching approaches and emphases.

6.5 Contributions to knowledge of this study

The study has made contributions to knowledge in the area of adolescent writing pedagogy in three areas: explicit teaching of the sentence level within the genre model in Australia; the use of Myhill, Jones et al.'s (2012) model of

contextualised grammar pedagogy in Australia; and the use of the computer analysis Coh-Metrix tool in studying adolescent writing development. These three areas will be discussed in turn.

6.5.1 Contribution to knowledge regarding the use of explicit teaching at the sentence level in Australia

The study provides some confirming data on views expressed in the literature about the scarcity of explicit teaching at the sentence level in teaching writing in Australian schools. As reported in Chapter 1, Derewianka and Jones (2010, p. 14) commented that Australian teachers have adopted the genre approach and are comfortable discussing language features and structures but tend to neglect the specific word and sentence choices. In addition, scholars such as Martin (2009), Myhill, Jones, et al. (2012) and Schleppegrell (2001) have recommended that teachers show students explicitly how the sentence- and word-level resources operate to make meaning in a text. The interview data show that, while all the teachers reported teaching the language features and structures, for example, essay structure, paragraph structure, and the use of evidence in a structured argument, the control teachers did not report explicitly teaching any sentence-level content beyond how to embed quotations. Further suggesting that, in her experience, this is a common practice, Anita, one of the intervention teachers, commented that the teaching of the sentence level "is often the one that you put to the back, just to get through the content" (Anita).

6.5.2 Contribution of the study to knowledge about the possible use of Myhill, Jones et al.'s model of contextualised grammar pedagogy in Australia

The model of genre-based writing pedagogy in Australia has always included attention to the way the sentence level creates meaning within the whole text. However, as discussed above, the model has not always been fully applied, even

though it has been suggested that addressing the sentence level explicitly would enhance students' writing outcomes. The study demonstrated a way to address teaching the sentence level explicitly by showing that it is possible to use Myhill, Jones, et al.'s (2012) contextualised grammar pedagogy as a teaching approach in Australia. One advantage this offers is that Myhill, Jones et al.'s model has been empirically tested and shown to be effective, which is extremely rare for a sentence-level writing pedagogy using grammar as a metalanguage. For example, Derewianka notes, referencing Andrews (2005), that "there is still a dearth of evidence for the effective use of grammar teaching of any kind in the development of writing" (Derewianka, 2012, p. 144).

As discussed in Chapter 2, Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy is a teaching approach that was tested in the UK. This model includes the use grammar as a metalanguage to show students explicitly how sentence-level language features contribute to making meaning in a text within a set of related teaching strategies. Myhill, Jones, et al. reported a large-scale randomised study that showed that the pedagogy had a statistically significant positive effect on adolescent students' writing skills. My study demonstrated that it is possible to implement the approach in an Australian context using an implementation method similar to that used by Myhill, Jones, et al., that is, by the provision of teaching materials "in which grammar was embedded where a meaningful connection could be made between the grammar point and writing" (Myhill, Jones, et al., 2012, p. 146). My study followed these scholars' guidelines for teaching approach and provision of materials; however, as discussed in Chapter 5, the limited time given to using the approach was a significant departure from their research process. Although students' texts did not show a statistically significant improvement in the measures

used, the feedback about the method from the two intervention teachers was that it represented a positive extension to their previous teaching practices.

> *I think overall I'm pleased to have done it. I'm pleased that you brought it to me because it made me be more conscious about, about teaching writing skills. (Anita)*
>
> *[the students] were just enthused; they were focussed; it was marvellous; you could see, you could just see the learning taking place (Barbara)*
>
> *It was great and they could see the value in it and I could see the value in it. (Barbara)*

6.5.3 Contribution to methodology of using the Coh-Metrix computer analysis tool in studying adolescent writing

My study has generated some data that may be useful to other researchers who wish to use the Coh-Metrix analysis tool in the context of adolescent writing development. No study so far located has used Coh-Metrix to investigate change in lexical density and left embeddedness between draft and polished essays written by early secondary school students. My study's comparison of draft to polished essays serves to demonstrate that individual students' Coh-Metrix measures can vary according to writing purposes and time allowed. The data generated on these measures may be useful for comparisons other researchers may wish to make.

Comparison with published results highlights how the measures may vary according to circumstances under which texts are written. While no identified previous study considered changes between draft and polished essays, or reported lexical density or left embeddedness for adolescent writing, one previous study in the area of adolescent writing development using Coh-Metrix was located, Crossley et al. (2011). Crossely et al. reported their result on mean number of modifiers per

noun phrase. Their Year 9 participants from a suburban school in Washington DC wrote an essay in 25 minutes in response to a SAT-style prompt. This is an essay written in the style of the standardized testing regime for college entrance in the USA; the prompt, or set question, is usually a topic of general knowledge with which students from all social backgrounds would be familiar. While the participants in the two studies are comparable in grade level and perhaps close to comparable in socio-educational background, the conditions of writing are different from those of my study. For Essay 1, the nearer of the two essays in conditions to those in the Crossley et al. study, the students had foreknowledge of the prompt, guidance about a possible paragraph structure, and approximately 60 minutes to write. These different conditions may have contributed to the higher means achieved by the participants in my study. Comparison data are set out in Table 6.1. The comparison suggests that students may use more complex syntax when they have time to consider their response in advance and more time to complete their writing task. However, the possibility that the students in the two studies had reached different levels of writing development cannot be discounted as a factor in the result.

Table 6.1 Comparison of mean number of modifiers per noun phrase data Crossley et al. and current study, Essay 1

	N	Mean	St Dev
Crossley et al.	62	0.583	0.160
Current study, Essay 1, Control group	31	0.89	0.16
Current study, Essay 1, Intervention group	29	0.95	0.20

6.6 Implications for practice

Some implications could be drawn from the study in the areas of further trialling the use of Myhill, Jones et al.'s (2012) contextualised grammar approach to teaching writing, in line with the recommendations of the language strand of the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting

Authority, 2012) syllabus; and in using the Coh-Metrix tool in furthering understanding of adolescent writing. In addition, some changes to practice at the school where the study took place could be beneficial.

6.6.1 Implications regarding further investigation of the use of Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy

Derewianka and Jones (2010) claimed that Australian teachers teach many aspects of the genre approach well, but often do not explicitly teach students how the word- and sentence- level aspects make meaning within a text. The interview data showed that, although the control teachers reported including many key areas of the expository essay genre in their teaching, they reported no explicit sentence-level teaching except showing students how to integrate quotations into sentences. Thus my study offers a little data that suggests that explicit sentence-level teaching could be expanded in this school. As the only available empirically tested model of contextualised grammar pedagogy, Myhill, Jones et al.'s (2012) model deserves further investigation to expand explicit sentence-level teaching in the school, since respected scholars such as Derewianka and Jones (2010), Martin (2009), and Schleppegrell (2001) all recommend explicit teaching at the sentence level as essential to good writing instruction.

Although Myhill, Jones et al.'s (2012) model was tested in the UK, its sentence-level focus sits comfortably with the models of language and pedagogy proposed in the Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) syllabus. My study showed that this teaching approach can be applied within the guidelines of the current Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) syllabus. The interview data showed that, as a result of re-ordering their teaching

priorities and including working at the sentence level in their planning, the intervention teachers were able to engage in some sentence-level teaching within a unit in which the control teachers found no time for the sentence level. Thus a contextualised grammar approach using Myhill, Jones et al.'s model is a possible option for implementing the current Australian Curriculum: English (Australian Curriculum, Assessment and Reporting Authority, 2012) syllabus.

However, an obvious constraint in using contextualised grammar pedagogy is that the use of contextualised grammar pedagogy depends on teacher knowledge of grammar and grammar pedagogy. The Myhill, Jones, et al. (2012) study used an intervention in which teaching/learning materials were provided to teachers who had no special training in using the materials. Provision of materials does not ensure the materials are used with insight and this point is made in the related study published by Myhill, Jones, et al. (2013) which reported that teachers' knowledge of grammar and how to teach grammar to improve students' writing both affected student writing improvement over the year-long study. While there was no known issue in my study with the intervention teachers' knowledge of grammar and how to teach it in a contextualised way, there is some evidence to suggest that many Australian teachers lack confidence in their knowledge of grammar and grammar pedagogy (Harper & Rennie, 2008; Jones & Chen, 2012; Macken-Horarik, Love, & Unsworth, 2011). Therefore it must be recognized that trialling of the pedagogy should include adequate professional development in these areas.

6.6.2 Implications of the study results for further use of the Coh-Metrix tool for research into adolescent writing development

The Coh-Metrix tool has assisted analysis of aspects of syntax relevant to the study of adolescent writing development. Its capacity to achieve a syntactic analysis

of large numbers of texts makes it a useful addition to research tools in the area. The comparison of the data of this study with that produced in the Crossley et al. (2011) study as well as the comparison of the data across Essays 1 and 2 completed in this study suggest that comparisons of syntax in essays should take account of the specific context in which texts are written. For example, factors such as the time taken to prepare and write the essay and the assistance available to the writers in producing the text may affect the complexity of the syntax used.

6.6.3 Implications for changes in teaching practices at the participating school

The study indicated areas of syntax where changes to teaching practices at the sentence level could benefit the students who took part in the study. Two sets of evidence suggested that learning experiences fostering the acquisition of a wider repertoire of written syntax could promote the students' development as writers. Firstly, the data showed that according to Myhill's (2008) developmental continuum, these students were at an average level of development for use of adjectives and adverbs. When they wrote an assignment, Essay 2, they used more adjectives and adverbs than they had used in their Essay 1, a one-draft essay. According to Myhill's (2008) continuum, more advanced writers would have used fewer adjectives and adverbs, and used other, more complex syntax to express the ideas. The 2013 NAPLAN data quoted in Chapter 1 showed that, on a holistic assessment of writing skills, students at this school were more advanced as writers than the whole Queensland Year 9 cohort. However, use of adjectives and adverbs was judged to be at an average level, apparently beneath their overall performance level. If some attention to teaching more complex syntax in this area were given, students' performance in the use of more complex syntax than simple adverbs and adjectives might be brought up to match the level of students' skills in other areas of writing.

The second set of evidence is the data on the difference between the students' syntactic complexity scores in Essay 1 and Essay 2. Here, the students decreased their syntactic complexity from their draft to their polished essay. A more desirable outcome would have been that Essay 2 was more syntactically complex than the single-draft Essay 1, because the assignment process offers the opportunity to redraft the syntax for greater sophistication. The writing processes of the students in the control classes caused their syntactic complexity to drop between Essay 1 and Essay 2. The intervention classes' texts showed a similar pattern, even though they experienced some explicit sentence-level instruction and were encouraged and given class time to polish the texts. Two possible explanations for this would be firstly, that increasing the complexity of the syntax was not made an explicit goal of the polishing process. Secondly, even if students had understood increased syntactic complexity as a goal of redrafting, they may not have had the skills or strategies to produce greater syntactic complexity. Myhill and Jones (2007) observed and interviewed 34 students about their revising processes and found that students can be aware of problems in their texts but can be unable to clearly articulate the problem; they speculated that increased metacognitive awareness would help students improve their editing processes (Myhill & Jones, 2007, p. 340).

Both these sets of data on student syntax usage suggest that focussed sentence-level instruction to expand syntactic repertoires could benefit these students. This instruction should include attention to redrafting procedures that increase syntactic complexity so that students understand increased syntactic complexity as a goal of a redrafting process and have available strategies to achieve this goal. Further investigation of these two aspects is warranted and may enhance writing pedagogy for these students.

6.7 Recommendations

Two suggestions for application of the implications of the study would be:

- That researchers in the area of adolescent writing pedagogy be encouraged to use the Coh-Metrix computer tool to produce fine-grained analyses of student texts, for example, to better understand the course of student syntax development and the effects of changes to teaching approaches on this development.

- That English teachers at the school where the study took place be encouraged to explore how to incorporate attention to how texts make meaning at the sentence level, with particular emphasis on strategies to enhance student syntactic development. Part of this exploration could be further investigation of the potential of using Myhill, Jones et al.'s (2012) model of contextualised grammar pedagogy.

6.8 Limitations of the study

While the study has provided some insights into teaching approaches at one secondary school, and the use of the Coh-Metrix analysis tool, it has some important limitations. First, it was a small study, with only 4 teacher and 60 student participants. Second, the socio-educational range of the students was less than comprehensive. Almost all students came from families in the upper 50% of the socio-educational scale. As discussed above, the school's NAPLAN writing results were above average for the Queensland cohort, and thus the average level of writing skills of participants was above average for Year 9 students. This means that the students are more advanced as writers than their state-wide peers. Third, the quality of the qualitative data has been affected by the limited number of interviews (one each for four teachers), their timing (after the unit had ended) and the impossibility

of triangulation that resulted from choosing to use only one type of qualitative data capture, interviewing, rather than, for example, additional data gathered by direct observation of lessons. Fourth, the shared school culture of the teachers and the researcher may have affected the range of evidence collected regarding teaching approaches, in that certain aspects, such as the use of elements of the genre approach, having been used by all concerned for many years, may have seemed too obvious to mention.

6. 9 Directions for future research

The study raises further questions. Two areas of further research could be first, the investigation of effective pedagogy in the area of the extended noun phrase in academic language and second, in teaching approaches suitable for teaching students strategies to use fewer dependent clauses in formal expository writing. The extended noun phrase's ability to package information succinctly means that improving skills in using this syntax for secondary school and tertiary students has a very wide applicability. The usefulness of real understanding of how and when to do this warrants further investigation in this area.

A second area of possible further investigation concerns the decreasing use of dependent clauses as students mature in adolescence. A goal of the study was to investigate whether teaching students strategies to decrease the number of dependent clauses they were using would help them develop the syntactic complexity of their writing in the expository essay genre. The data suggest that students made little or no progress in this area. However, as discussed in Chapter 2, there is convincing research data and expert commentary that show that development in this area of syntax contributes to key academic writing skills. Therefore, how to foster this development remains an important question for writing teachers. Further questions

that need to be answered include at what point in a student's syntactic development it is efficient to teach the strategy, and ultimately, whether strategy instruction can hasten progress along the developmental continuum of writing skills. Given that writing is a learned skill (Cremin & Myhill, 2012, p. 10; Halliday, 1985, p. vii), it should be.

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Appendices

Appendix A: Interview questions

1. Tell me about the teaching strategies you used for the unit.
2. What differences in response did you see from the more and less skilled writers?
3. How would you advise another teacher to introduce the teaching strategies now that you have tried it with your class?
4. Which of the materials did you use?
5. What changes would you make to the materials if you did it again?

Appendix B : Teaching materials supplied to teachers

My study is based on a pedagogic approach defined by Myhill, Jones, Lines and Watson in their 2012 paper. The study they detail in this paper produced good long-term improvements in adolescent students' overall writing skills.

The **overall goal** of the project is to have students understand that writing more formally and succinctly is a genre feature of the expository essay, and for them to learn more sentence-level skills to create a more formal and succinct text in their assignments.

Myhill, Jones, et al.'s (2012) guidelines to the contextualised grammar teaching pedagogy.

- The grammatical metalanguage is used but it is always explained through examples and patterns.
- Links are always made between the feature introduced and how it might enhance the writing being tackled.
- The use of 'imitation': offering model patterns for students to play with and then use in their own writing.
- The inclusion of activities which encourage talking about language and effects.
- The use of authentic examples from authentic texts.
- The use of activities which support students in making choices and being designers of writing.
- The encouragement of language play, experimentation and games.

I want to see if we can get students to move along the developmental continuum by writing fewer dependent clauses in their sentences. In an essay, they should be replacing some dependent clauses with noun phrases, especially extended noun phrases.

I have defined terms for the students further down, but I am happy for you to use whatever labels you are currently using.

I want you to emphasise **the key strategy** for writing more succinctly:

- Changing verbs to nouns and rephrasing the sentence to eliminate a clause. Sometimes this works well when you combine two adjacent sentences. The resulting nominalisation is also a way to increase the level of formality in the language.

Further guidelines for the contextualised grammar approach:

- Please discuss the whole issue, sentence–level, of the academic language needed to write a good expository essay with the class using a real example to show them what the difference looks like.
- In doing this, please point out the need for formal language, and succinctness.
- Please then explicitly teach the students some ways to improve succinctness (and formality of language) in their essays: firstly, by using a strategy to reduce the number of dependent clauses in their texts, by changing clauses to noun phrases. Mostly the clauses will be dependent ones, but occasionally principal clauses can be changed and a dependent clause changed into the principal clause; secondly, by joining sentences, using the strategy; thirdly, other ways the students might already know, or you discuss, like using nominalisation (changing verbs to nouns). The strategy is really a nominalisation technique, but it goes a bit further, by having as its purpose the

reduction of the number of dependent clauses per sentence, which reliably achieves greater succinctness.

- Please then practice the strategy.
- Please use the grammatical language in the teaching. Grammatical language, as in *noun, verb, dependent clause, principal clause, noun phrase.* This is designed to help the students to achieve a real understanding of the process they are engaging in; it gives them a ready-made generalisation to guide their practice and their continued use of the strategy. This is really important to making a difference to students' application of the strategy to new contexts, i.e. to transferring the learning, in this case, firstly to their upcoming assignment, but long-term learning is our real goal.
- If possible, please find time for a little group work so the students can play around with the concept to further embed their understanding as they discuss.

List of materials in the package

I have included materials for practising identifying dependent and independent clauses and noun phrases. You will know if the classes need to review this.

In addition, there are sentences and paragraphs with the strategy modelled, exercises for this and a model expository essay on “Mao’s Last Dancer”. In addition, there are drafts of essays for discussion or redrafting.

Feel free to modify any of this material for your own purposes, or to write your own versions of it.

Identifying independent and dependent clauses worksheet

An **independent clause** is one that can stand alone as a sentence. For example: *We were told to pack our belongings* because we would be moving out.
A **dependent clause** is one that cannot stand alone, but needs to be a part of a sentence. We were told to pack our belongings *because we would be moving out.*

Use a highlighter to highlight the **dependent clauses** in these sentences from *Mao's Last Dancer:*

a) We would share those poky little rooms until we graduated.
b) I was among those who suffered from the severe cough, sore throat and high fever.
c) He would fume with anger if we didn't remember the dance steps.
d) Sometimes I felt the whole universe spinning around me when I walked out of these classes.
e) After lunch I followed him to his dormitory where he took out two racquets and a feathery shuttlecock
f) He discovered that I remembered every word he said, as long as I was interested.

Now, add **dependent clauses** to these sentences which are all also independent clauses. Remember that a dependent clause has to have a verb. Here are some possibilities for the first sentence.

1. Chairman Mao was leader of China.
   Chairman Mao, who died in the 1980s, was leader of China.
   Chairman Mao was leader of China, which is the country with the largest population of any country in the world.
   Chairman Mao was leader of China when the Cultural Revolution took place.

Your turn now:

2. Li Cunxin wrote the novel "Mao's Last Dancer".
   Li Cunxin wrote the novel "Mao's Last Dancer" which _____.
   Li Cunxin , who _____ , wrote the novel "Mao's Last Dancer"
3. Li Cunxin directs the Queensland Ballet.
   Li Cunxin, _____, directs the Queensland Ballet.
4. "Mao's Last Dancer" is a story about a poor Chinese boy.
5. Li's persistence contributed to his success.
6. The book begins with the story of Li's childhood.

Review: how to identify noun phrases worksheet

A noun phrase has a noun as the most important word and other words (e.g. adjectives, adverbs, prepositions and articles) that give more information around it.
Examples. The noun phrase is in *italics*.
We shared these rooms *until our graduation.*
Li's story is set *in the People's Republic of China.*
A world-famous ballet dancer addressed *the school assembly.*

Highlight the **noun phrases** in these sentences**.**

1. Li's perseverance and commitment to ballet enabled him to go to America for further experience.
2. It is clear that Li's commitment and sacrifice was his path to success.
3. Li was born into a peasant Chinese family and grew up in great poverty.
4. He eventually became a ballet dancer of world calibre.
5. Until he saw Minister Wang being driven in an expensive car, Li thought that everyone in China was treated equally.

Now add **a new noun phrase** to each of these sentences.

1. The Minister of Culture refused his request.
   The Minister of Culture refused his _____ request.
   The Minister of Culture refused his request _____.
2. Teacher Xiao was intolerant of laziness.
   Teacher Xiao was intolerant of laziness _____.
   _____ teacher Xiao was intolerant of laziness.

3. He was determined to help his students.
4. Li had to overcome our fear.
5. Li worked on techniques.

Practice this strategy to change clauses into noun phrases.

Strategy steps:
1. Identify the dependent clause.
2. Underline the verb in the dependent clause.
3. Change the verb into a noun.
4. Now rewrite the sentence using the noun.

An **independent clause** is one that can stand alone as a sentence. For example: *We were told to pack our belongings* because we would be moving out.

A **dependent clause** is one that cannot stand alone, but needs to be a part of a sentence. We were told to pack our belongings *because we would be moving out*.

A **noun phrase** has a noun as the most important word and adjectives, adverbs, prepositions that give more information around it.

Examples The noun is in *italics*.
Until our *graduation*
Of the People's Republic of *China*
A world-famous ballet *dancer*

Example:
We would share those poky little rooms *until we graduated*.

The verb is *graduated.* The associated noun is *graduation.*
Now, rewrite the sentence using the noun you have just identified.
We would share those poky little rooms until *graduation*.

Notice that you have changed the dependent clause *until we graduated* into a phrase *until graduation.*
Sometimes you might want to change the *verb in the main clause* and then rewrite the sentence. You will probably then make the dependent clause into the main clause.

Example: The Ministry of Culture *opposed* dancers going back to America but Li wanted to be in control of his destiny.
The verb is *opposed*. The associated noun is *opposition*.
Li wanted to be in control of his destiny in spite of the *opposition* of the Ministry of Culture.

Try the strategy on these sentences:

1. Li loved his family very much and was devastated when he had to leave them.
2. If Li had not been so persistent, he might not have got the chance to go back to America for a second time.
3. Li desperately wanted to see the Minister for Culture when he was refused a visa for America.
4. After he went to America, the Ministry of Culture granted him permission to return to America for another year.
5. When Li was accepted into the dance academy, he persisted because he did not want to shame his family.

Worksheet for practising changing dependent clauses to extended noun phrases

Note to teachers:
These practice sentences were taken from student essays on *Mortal Engines*. In each case, the first sentence/group is from a student's essay. This is a good strategy to use with combining two sentences to create a more succinct text. I have provided possible answers but that leaves you free to use the answers or not as you judge useful.

1. Tom had always believed that a chase was a time to rejoice and party. It demonstrates that Natsworthy is beginning to realise the effect that Municipal Darwinism has on the people and the cruelty of it all.
   Tom's belief that a chase was a time to rejoice and party demonstrated the beginning of Natsworthy's realisation of the effect of Municipal Darwinism on the people and the cruelty of it all.
2. When he finally returns to London he becomes aware of the fact that "it was bigger than he had remembered, and much uglier".
   On his return to London, he becomes aware of the fact that "it was bigger than he had remembered, and much uglier".
3. Tom's perspective has completely changed; now looking at London like a horrible machine instead of the powerful, strong city. This is important because Tom has finally seen the darkness of London.
   The change in Tom's perspective, now looking at London like a horrible machine instead of the powerful, strong city, shows Tom has finally seen the darkness of London.
4. When he falls from London into the dreaded Out-Country his life begins to change as well as himself.
   His fall from London into the dreaded Out-Country marks the beginning of changes to both Tom and his life.
5. When Tom arrives in Airhaven he is in awe of its many flying contraptions.
   On his arrival in Airhaven Tom is in awe of its many flying contraptions.
6. Tom's arrival at the static city of Batmunkh Gompa is where his responses begin to change drastically and rapidly as he is exposed to continuous and numerous events.
   Tom's arrival at the static city of Batmunkh Gompa marks rapid and drastic changes to his responses as he is exposed to continuous and numerous events.
   Tom's arrival at the static city of Batmunkh Gompa marks rapid and drastic changes to his responses following his exposure to a storm of events.
7. He began to realise that what he had believed was false.
   He began to realise that his beliefs were false.
8. Tom is starting to change his views little by little as he is travelling the world and discovering the truth about it.
   By travelling the world and discovering the truth about it, Tom is slowly starting to change his views.
9. This implies that the negative approach to places outside of London is what Tom believes in and nothing else as he has never lived anywhere different. Hence, most Londoners think alike because of the concepts that London brainwashes them with.
   Tom's negative approach to places outside of London is the result of his never having lived anywhere else. The brainwashing that Londoners receive means that most of them think alike.
   Tom's brainwashing and his lack of experience of other cities explain his negative attitude to places outside of London.
10. When Tom gradually realizes how the alternate life is not what he expected, Tom's thoughts slowly start to change and begin to advance.
    Tom's gradual realization that the alternate life is not what he expected slowly begins to advance his thinking.

Examples of sentences to redraft using the strategy to make them more succinct.

These sentences are taken from student NAPLAN practice essays.

Combine each set of sentences by first changing a verb, particularly a verb in a dependent clause, to a noun and then recast the sentence. You are aiming to write all the information more formally and in fewer words.

1. Bono should receive an award for being a hero because he could choose to be a drug addict or a hypocrite but instead in between concerts and world tours, he devotes his time to others and he doesn't ever say a word about it.
2. Furthermore, he has never missed a school function or birthday. This is pretty impressive for a busy working father.
3. My father did not have the easiest of upbringings, nor the best education, yet he has made the best of it.
4. She keeps with her roots, too, and always shows me that being myself is completely fine.
5. For example, his famous novella, "Rita Hayworth and the Shawshank Redemption" has been regarded as a fantastic story that details shocking revelations about prison life.

Possible answers:

1. Bono should receive an award for being a hero because, instead of choosing to be a drug addict or a hypocrite, he devotes his time between concerts and world tours to others, without ever saying a word about it.
2. Furthermore, never missing a school function or birthday is pretty impressive for a busy working father.
3. Without the easiest of upbringings or the best education, my father has made the best of it.
4. In addition to maintaining her roots, she always shows me that being myself is completely fine.
5. For example, his famous novella, "Rita Hayworth and the Shawshank Redemption" has been regarded as a fantastic story detailing shocking revelations about prison life.

Suggested group work

Can you re-write these sentences copied at random from your Whale Rider essays in fewer words? You can write one or two sentences, whichever you think creates a clear meaning. Which group will have the fewest words and all the information? Which group will write the clearest sentences?

1. The shot of this frame appears to be a mid-close-up that adds importance and emotion to the scene by creating a sense of bonding between Pai and the whale. The use of Pai's pained expression and the dark lighting symbolises that Pai is upset that a whale so close to her heritage is beached and gradually dying as well as the sky raining tears on the beach of dying whales.
2. The eye-level close-up further shows that Pai is considered equal to the whale. This equality prompts the audience to further approve of Pai's potential status as leader. This is because the whale is an important aspect of the Maori tribe and any spiritual connection of equality with it is deemed important.
3. The fact that the tribe is falling apart and losing tradition is shown through the beached whales. Also that the tribe tried to move the beached whale and failed as Paikea wasn't helping is a symbol that Paikea is the key to weave back the thread and Paikea and save the tribe.
4. Paikea is positioned further away from the camera than Henri. This gives the effect that she is much smaller and insignificant. This is ironic because later in the scene Paikea actually beats Henri during the fight.
5. The lighting used in this frame is neutral lighting, which makes the fight seem like a fair fight, which draws more attention to how Paikea won. The lighting also helps to show Paikea as innocent, as it shines on the front of her concentrated face, after Henri's surprise attack.
6. After Paikea has knocked the taihia out of Henri's hands, Koro comes outside from the concert in the hall to see what is going on. He sees Paikea do this and forces Paikea to say sorry to the boys for coming onto the sacred school ground and ruining these boys' future. At first when Koro tells Paikeo to say sorry to the boys she does not reply. Only when Koro yells at her does she say sorry but she says it in a quiet voice and doesn't mean it.

Suggested group work

Note to teachers:
Students might like to play around with their knowledge and reverse the strategy.

Can you write these sentences in more words without adding any more information?

1. The traditional fighting style suggests the struggle for leadership of the tribe between Paikea and Henri .
2. The lighting showing only half of Paikea's face suggests a sense of uncertainty around the tribe's new leader.
3. Paikea's mixture of traditional dress and a modern t-shirt symbolise her respect for tradition and her forward-looking, modern attitude.
4. Paikea is slightly off centre in this shot, symbolising her unreadiness to become the leader of the tribe.
5. Henri's costume of football jersey and shorts contrasts with Paikea's mixture of traditional and modern, suggesting their different attitudes to tradition.

Example of student's body paragraph and my redraft using all the strategies.

Version 1: Student paragraph:

Li had opposition from the Chinese Ministry of Culture but he desired to be in control of his destiny and therefore worked hard to change their decision. After his first trip to America the Chinese Ministry of Culture had granted him permission to go back to America for a year. But when Li went to pick up his passport, he was rejected because they thought he was too young to go back by himself. Li persevered to change his destiny and to return to America. For example, "all [he] could see was a never-ending road leading nowhere.[His] heart raced, [his] legs cramped and [he] gasped for air. 'I have to get out,' he kept telling himself." (257) Because Li enjoyed America so much in his last stay, when he got rejected, he was so frustrated he was desperate to leave China. If this didn't happen to Li he may have not tried as hard to leave China and get back to America, he may have not been able to get back to the freedom. Another example is when "on the third night [he] returned to Minister Wang's residence ... [he] was prepared to wait all night for a chance to see the minister" (263) Li came back for a third night just to see minister Wang to try and make him change his mind about Li going back to America. It shows how dedicated Li was to get back to America, back to freedom, back to Ben's house.

Version 2 Redraft, trying to make it more succinct by changing dependent clauses to noun phrases, eliminating repetition and combining sentences.

Li's desire to be in control of his destiny made him work hard to overcome the opposition of the Chinese Ministry of Culture. Following his first trip to America, the Chinese Ministry of Culture had granted Li permission to go back to America for a year. However, on going to pick up his passport, he was rejected as too young to return alone. Li persevered to change his destiny and to return to America. "All [he] could see was a never-ending road leading nowhere.[His] heart raced, [his] legs cramped and [he] gasped for air. 'I have to get out,' [he] kept telling [him]self." (257) Having enjoyed America so much in his last stay, this rejection made Li desperate to leave China. Without that enjoyment, Li may have not tried as hard to leave China and return to America and freedom. Therefore "on the third night [he] returned to Minister Wang's residence ... [he] was prepared to wait all night for a chance to see the minister" (263) and persuade him to change his mind.

(Notice here how the nominalisation of "enjoyed" to "enjoyment" in the next sentence constitutes a cohesive or linking device.)

Further example of a paragraph

Student paragraph, first draft.

When Li wanted to go back to America for another visit, the Minister of Culture refused it, but Li didn't give up. After he went back to the academy, teacher Xiao and teacher Shu tried to think of how to get Li back to America. The next day when Li was ready to give up and take his holidays back home he found a newspaper article and the heading says **Minister Wang will lead a Delegation to south America for five weeks**. Li soon saw his opportunity to make it back to America. "We can lobby the vice-minister in charge to ask permission for Li to leave for America" (p. 268). The Vice -minister might be reluctant to take on the responsibilities after Minister Wang refused it before. They might be able to trick the Vice-minister into allowing Li to go back to America for another year. In conclusion the Chinese government had been lying to the Chinese people for many years and that Li might have just coped onto their plan. "How foolish was I to believe that everyone is equal in China and that I had believed this Communist Doctrine for so many years" (p. 265).

This paragraph needs to avoid repetition, combine some sentences, use quotes more skilfully, write sentences more carefully, and explain the last point more clearly.

For example

When the Minister of Culture refused to allow Li to go back to America for another visit, teacher Xiao and teacher Shu tried to think how Li could return there. When Li was ready to give up and go home for holidays, he found a newspaper headline saying **Minister Wang ... will lead a Delegation to South America for five weeks** (p. 268). Li saw an opportunity to "lobby the vice-minister in charge to ask permission ... to leave for America" (p. 268). Although the Vice-Minister might have been reluctant to accept responsibility for over-riding Minister Wang's refusal, Li and his teachers were able to persuade the Vice-Minister to allow Li's return to America. Li pursued his dream because, when Minister Wang ignored him, he realised at last that he had been "foolish to believe that everyone is equal in China. I had believed this communist doctrine for so many years" (p. 265).

Further example/ possible group work

A student's first and final drafts. Trace the changes. Can you suggest any more?

First draft.

Li's determination and persistence proved a crucial part in his life and him achieving his goals. An example to show this is a quote such as "there will be triumphs as well as setbacks, but if you give up now you will never succeed" (267) Teacher Xiao is telling him to keep trying and encouraging Li to persevere through the hardship and not lose sight of his dreams. If Li had given up, he would have been sent back to the village to farm. Another demonstration to show Li's perseverance as a quote would be "Cunxin ... I have never once doubted your determination" (263) Li possesses such an extraordinary level of persistence that the people around him including his teachers are admiring his strength. Li's determination inspired his teachers and parents to support him through his trials.

Final draft:

Li's determination and persistence allowed him to achieve his goals. Teacher Xiao taught him that "there will be triumphs as well as setbacks, but if you give up now you will never succeed" (267) Li takes this to heart when he practices and perfects his split jumps for the exam. Teacher Xiao later tells him, "Cunxin ... I have never once doubted your determination" (263). Li possesses such an extraordinary level of persistence, that the people around him, including his teachers, admire his strength of purpose. For example, Li's determination inspired his teachers and parents to support him through his trials.

What changes to punctuation would you suggest?
Put the whole paragraph into the present tense.

An example for students to redraft using the strategy to make the text more succinct

When Li got to Madame Mao's dance academy there were plenty of chances when he could have given up on being a dancer but he didn't. For example, in his fourth year a day before his exams he promised one of his teachers that he would be able to do a split jump for the exam. "I quietly slipped into one of the studios and started to practice my split jumps for our Beijing Opera exam." Even though some people would think that it was impossible he still tried to do it. He learnt to be determined when he was poor as a child. In addition, in Li's sixth year, he was struggling with turns so he sneaked out at night and practised by candle light. "I lit the candle and started to practice my turns. The candle threw only a faint light in front of me. It was hard but I thought if I could turn in the dark then turning in the light would be easy" (210). Even though he was bad at it at first he kept trying and improving. If he hadn't perfected the turns he would not have been such a great dancer and this would have changed his future. The dance academy was the making of Li, so this was such an important part of his life. If he had not kept trying, he would have been just another peasant.

Another example:

Li had many unexpected and dramatic changes but Li did not know that these changes could lead him to a better life than he expected. Li's life had not been easy since the day he was born. He was poor and lived in one of the harshest places in China. Li thought positively and got through many obstacles. He worked day and night to support his family. He was able to do things that were hard and boring. It was important for Li to have a positive attitude because it got him through many hardships.

Model essay: first draft/ student style

Thesis: Li Cunzin achieves his dream through persistence throughout the time he describes in “Mao’s Last Dancer”.

In Li Cunzin’s novel “Mao’s Last Dancer”, Li consistently shows persistence when he pursues his dream of leaving his Chinese village and becoming a dancer. Each time he meets problems and difficulties during his childhood, at the dance academy and in the USA, Li finds the courage to keep trying and to pursue his dream. His persistence makes his story inspiring, and encourages readers to understand that, as Orison Swett Marden wrote, “Success is the child of perseverance.”

Readers can see that Li’s ability to persevere to overcome difficulties begins in his childhood when he is a poor Chinese peasant. When he is tested as a schoolboy to join the ballet academy, the officials push and pull his limbs to test how flexible he is. This is so painful the other students had cried out and winced. Li refused to cry out because he didn’t want to lose his dignity. He demonstrates his willpower and resists showing pain. In doing this, the officials are impressed by him and he is chosen to join the academy. Furthermore, when he has to leave his home as a 10 year-old, he is afraid of leaving his family, but listens to his mother’s advice: “Never look back.” (p. 107) Again, he shows at a young age that he can face fear in order to gain his goal of having a different future from being a peasant farmer. As a boy, Li can show persistence to face hardships. Readers can see this characteristic in his later behaviour at the academy.

At the dance academy, Li again endures many hardships to pursue his dream. When he first arrives, he knows no-one and cannot understand the dialects the other boys are speaking, but he fights his “fear and growing loneliness.” (p 117) He understands that he must endure the pain if he is to be successful. He persists in spite of the problems he faces. When the physical training begins, he counts to one hundred to take his mind off the pain of stretching his legs against the barre. He is determined to be “mentally strong enough to last” (p 124). This is just one example of his perseverance when he faces pain. Furthermore, as the years go by, he changes his attitude and trains five times a day when his teachers expect him to practise only once a day. He becomes more and more determined to be the best dancer he can be. His persistence shows in his self-discipline to do more than is required. This is rewarded when he is selected to visit America to learn more about dancing.

Li is chosen to study in the USA at the Houston Ballet Academy, and during this time as well, he must show a lot of persistence to follow his dream of being a dancer and ultimately to leave China permanently. His second visit to Houston is almost prevented by the Chinese Minister for Culture, who refuses his visa application. However, Li does not allow himself to be discouraged and he first spends three sleepless nights waiting outside Minister Wang’s house in order to meet him and beg him to change the decision. When this does not succeed, he gets his teachers to lobby the acting Minister of Culture while Minister Wang is out of China on a visit to South America. His refusal to give up is rewarded when he gets the visa he wants. Again, his persistence helps him achieve his dream. Moreover, after almost a year in America, Li decides not to return to China but to pursue a dancing career in America and during negations about this, he is held prisoner in the Chinese Embassy. After several days of refusing to return to China, he tells the officials “No, I won’t go back. Do whatever you like with me.” (p. 306) The reward for this persistence is that he is allowed to have his freedom. Once more, persistence has won Li the right to pursue his dream.

Through so many trials and trouble, so much pain and loneliness, Li Cunxin has overcome all obstacles to live his dream. Without persistence, he could not have achieved the life he wanted to live.

Polished version of model essay

Thesis: Li Cunzin achieves his dream through persistence throughout the time he describes in “Mao’s Last Dancer”.

In Li Cunzin’s novel “Mao’s Last Dancer”, Li consistently shows persistence in pursuing his dream of leaving his Chinese village and becoming a dancer. Each time he meets problems and difficulties during his childhood, at the dance academy and in the USA, Li finds the courage to keep trying and to pursue his dream. His persistence makes his story inspiring, encouraging readers to understand that, as Orison Swett Marden wrote, “Success is the child of perseverance.”

Readers can see that Li’s ability to persevere to overcome difficulties begins in his childhood as a poor Chinese peasant. As a schoolboy being tested to join the Beijing Dance Academy, the officials push and pull his limbs to see how flexible he is. This is so painful the other students “cried out and winced.” (p. 92) Determined not to lose his dignity, Li refuses to cry out. He demonstrates his willpower to resist showing pain. In doing this, he impresses the officials and is chosen to join the academy. Furthermore, when he has to leave home as a 10 year-old, he is afraid of leaving his family, but listens to his mother’s advice: “Never look back” (p. 107). Again, he shows at a young age that he can face fear in order to gain his goal of having a different future from being a peasant farmer. As a boy, Li can show persistence to face hardships. Readers can see this characteristic repeated in his later behaviour at the academy.

At the dance academy, Li again endures many hardships to pursue his dream. On his arrival, he knows no-one and cannot understand the dialects the other boys are speaking, but he fights his “fear and growing loneliness” (p 117). He understands that he must endure the pain if he is to succeed. He persists in spite of the problems. When the physical training begins, he counts to one hundred take his mind off the pain of stretching his legs against the barre. He is determined to be “mentally strong enough to last” (p 124). This is just one example of his perseverance in the face of pain. Furthermore, as the years go by, he changes his attitude and trains five times a day when only once is expected. He becomes more and more determined to be the best dancer he can be. His persistence shows in his self-discipline to do more than is required. This is rewarded when he is selected to visit America to learn more about dancing.

Li is invited to study at the Houston Ballet Academy, and during this time as well, he shows a lot of persistence to follow his dream of being a dancer and ultimately to leave China permanently. His second visit to Houston is almost prevented by the Chinese Minister for Culture’s refusal of his visa application. However, Li does not allow himself to be discouraged and he first spends three sleepless nights waiting outside Minister Wang’s house in order to meet him and beg for a change of this decision. When he does not succeed, he gets his teachers to lobby the acting Minister for Culture while Minister Wang is out of China on a visit to South America. His refusal to give up is rewarded by the visa he wants. Again, his persistence helps him achieve his dream. Moreover, after almost a year in America, Li decides not to return to China but to pursue a dancing career in America and during negations about this, he is held prisoner in the Chinese Embassy. After several days of refusing to return to China, Li is afraid but he tells the officials “No, I won’t go back. Do whatever you like with me.” (p. 306) His persistence is rewarded by finally being allowed to stay in the USA. Once more, persistence has won Li the right to pursue his dream.

Through so many trials and trouble, so much pain and loneliness, Li Cunxin has overcome all obstacles to live his dream. Without persistence, he could not have achieved the life he wanted to live.

Appendix C: Materials from Charles, teacher of Class C/C

Instructions for Essay 1

Year 9 Mainstream English: Class Analysis Task of *"The Third Man"*

Respond to the question below in the form of an essay. Write between 500 – 800 words in the final draft.

HOW ARE THE IDEAS OF LOYALTY, DISHONESTY AND BETRAYAL OF TRUST DEVELOPED BY THE CHARACTERS AND THE SETTING OF THE FILM?

- **Write a brief introductory paragraph explaining why these ideas (loyalty, dishonesty and betrayal of trust) are**
  - **apparent and**
  - **important in the film**
    - **particularly in the film's setting and character relationships.**

Body of essay:

- **In one paragraph, consider how the untrustworthy or treacherous setting of post-war Vienna (including the penicillin swindle of which Harry Lime was a party) helps the viewer understand the character relationships and ideas of loyalty, dishonesty and betrayal of trust.**

Then in the following paragraphs:

- **Consider separately the character relationships in the film. How does each relationship below give the viewers a distinct* understanding about the meaning of loyalty and trust, or dishonesty and the betrayal of loyalty and trust? (Not each relationship requires a separate paragraph).**
  Consider
  - **Anna and Harry Lime**
  - **Harry Lime and Holly Martins**
  - **Holly and Anna**
  - **Holly and Captain Calloway and Sergeant Paine; and Holly and Harry's friends: Popescu, Winkel and Baron Kurtz.**

    *** distinct = by itself and separate from the other relationships**

- **Conclude by summing up what a viewer can learn about loyalty, dishonesty and betrayal by seeing this film.**

Supporting sentences:

For the introduction:

The ideas of loyalty, dishonesty and betrayal of trust are apparent and important in the film as they develop the setting, plot, characterisation and outcome.

For the paragraph about setting:

The actual conditions in post-war Vienna cause dishonesty and betrayal of trust because …

For the paragraphs about character relationships:

Each character relationship in the film gives the viewers a distinct* understanding about the meaning of loyalty and trust, or dishonesty and betrayal. For instance, the relationship of Anna and Harry is – on the face of things – based on _____, but, really, we see that Harry _____, so the evidence points to the idea of _____. This idea develops further when _____.

For the conclusion:

The film succeeds in its development of these ideas ……

Guide for Essay 2

Suggested structure of Mortal Engines essay response about Tom's thoughts to places

Introductory paragraph to ideas and subject matter of the novel:

The renowned novel *Mortal Engines* narrates an adventurous tale of character and ideological maturation of the three teenage protagonists: Tom, Hester and Katherine. Each character is vividly and credibly developed as separately they respond to and rise to meet the puzzles and challenges set for them and for conflicting civilisations caused in the struggle for survival and power by competing Traction Cities, of which London is a member. The city is on traction, chasing less powerful communities with the intention of consuming them physically.

(Limiting the topic paragraph): Focusing only on Tom Natsworthy, the reader appreciates his growth in character and outlook through his associations with key places where his adventure unfolds. London is first and finally central to Tom's being, but along the way, the places of the Out-Country, Airhaven and Batmunkh Gompa are stages where Tom learns more about the complexities of his widening world and about himself and his reactions. In the first pages, Tom's sympathies are clear: …

Third paragraph: London
- outline of Tom's attachment to and feelings for London (6)
- continuing loyalty to London despite disputing evidence ( )
- practice of Municipal Darwinism (10,59)

Fourth paragraph: the Out-Country (in this episode, Tom's trust in others becomes a key consideration)
- what does the Out-Country teach Tom?
    - to survive on his own, to rely on his own faculties (e.g. making a hole in the prison wall at the Stayns trading-cluster)
    - to develop his own thoughts in response to new experiences and outlooks of new people
- comment on and quote from pp 42, 44, 47, 50, 62, 64

Fifth paragraph: Airhaven: the place of transit: **trust becomes a more prominent issue**
- what is it? See p82
- **70: Tom forced to trust Anna Fang: reflection: those whom we trust we tend to believe their ideas**
- 77: Tom's disillusionment with Valentine
- 80: Tom learns a lesson from Anna Fang about Municipal Darwinism with the example of Motoropolis
- 70/ 92: first page shows Tom trusts too much; second reference shows he is distrustful but is forced to trust Hester's good intentions

Sixth paragraph: After Airhaven, before Batmunkh Gompa (BG)
- Key changes in his responses before BG: see 147 NB and 194-195: both about being challenged by the realities of Municipal Darwinism; Tom forced into the heart of his personal conflict over MD
- 209: Tom moved by sight of BG
- 212/235: Tom shocked by Anti-Traction League's suggestion of destroying London
- 214/237: after his public outburst, now by himself, Tom is seized by worry that London might destroy BG

- 232: Tom's outlook about Valentine and London after he sees Valentine murder Anna Fang

Seventh paragraph: London again

- 278 & 288: Tom responsible for destroying the 13th Floor Elevator whose wreckage incinerates the Top Tier of London
- 290: the very cessation of London is a lesson about Tractionism's ultimate ineffectiveness
- 291: Tom never loses his abiding loyalty to London; he grieves over its destruction

Concluding paragraph: Tom's changing responses concern not only …

1.
2.
3. but also his views about himself as a person and more widely about human relationships.

Guide to embedding quotations distributed to Class C/C

Methods of prose quotation

Original passage:

> Coonardoo thought of herself as if she were a child she had known; one of her own children perhaps. As if she had died; her Coonardoo existence had come to an end, that night when Hugh threw her into the fire.
>
> - *Coonardoo* by Katherine Susannah Prichard

1. Paraphrase:
   At the end of the novel Coonardoo, its protagonist, self-exiled from the property Wytaliba and surviving on the uncertain and rough favours of the Broome seafaring men, returns to die where she was born and had fallen in love with Hugh, the white master; but Coonardoo believes she is already dead, from the night Hugh threw her into the fire.
   (A paraphrase is not a verbatim quotation; only key words from the original passage are used. Hence, there is no requirement for quotation marks, although page numbers are desirable.)
2. Quoted excerpt that is grammatically and semantically integrated with own commentary:
   At the point of dying, the time-ravaged Coonardoo "thought of herself as if she were a child she had known"; but, in fact, her children had abandoned her, and, in her grief, the idea comes to her that "her Coonardoo existence had come to an end".
3. Indicating the replacement within square brackets of an original word within a quotation:
   Coonardoo was horrified by the memory of Hugh whom she still loved; the memory concerned "that night when [he] threw [Coonardoo] into the fire".
4. Ellipsis:
   "Coonardoo thought of herself … As if she had died ..." just before the poignant moment of her own literal death.
5. Quoted excerpt that is marked off from commentary and indented:
   Prichard's capability as a writer of pathos, of women's struggle against white male suppression is nowhere better exemplified than in her description of the dying moments of Coonardoo in which the life-ravaged black woman looks outside herself, an experience anticipating her death:

   > Coonardoo thought of herself as if she were a child she had known; ... As if she had died; her Coonardoo existence had come to an end ... (205).

Appendix D: Student task sheet for Essay 2

YEAR 9 ENGLISH: Mainstream
Term 3, 2014

Mortal Engines Analytical Expository Essay

STUDENT: _____

FORM CLASS: _____

ENGLISH TEACHER: _____

ACARA standards descriptors

RECEPTIVE MODES (listening, reading and viewing)

- evaluate and integrate ideas and information from the text to form their own interpretations.
- evaluate ways the text positions audience.

PRODUCTIVE MODES (speaking, writing and creating)

- understand how to use a variety of language features to create different levels of meaning.
- create a response to issues, interpreting and integrating ideas from the text.
- contribute actively to class and group discussions, comparing and evaluating responses to ideas and issues.
- edit for effect, selecting vocabulary and grammar that contribute to the precision and persuasiveness of a response and use accurate spelling and punctuation.

TASK OVERVIEW

Analytical Expository Essay exploring the changing views of the novel's protagonist.

CONDITIONS

- **Mode:** Written (Essay)
- **Time allowed:** four weeks' notice of task
  - Class study of novel and essay technique
  - Class and home preparation
- **Length:** 450 words
- **Draft of Essay:** August 6 (Week 4)
- **Final Essay:** August 15 (Week 5)

Common Curriculum Elements:

- **Structuring and organising an extended written text**
- **Analysing**
- **Synthesising and justifying**

Task

You are to write an analytical essay explaining how Tom's responses to different settings in *Mortal Engines* reflect his changing views about the world he inhabits.

You must account for how "Mortal Engines" is a *Bildungsroman* by analysing Tom's changing responses to:

- **London**
- **The Out – Country**
- **Airhaven or Tunbridge Wheels or Black Island**
- **Batmunkh Gompa**

All four places must be accounted for (though not equally) with a return to London after Batmunkh Gompa. Any significant development of Tom's thinking outside the four designated places should be included as this thinking occurs.

Process

1. As you only have to write 450 words, you need to structure your essay with a short introduction, two larger body paragraphs or four shorter body paragraphs, and a short conclusion. **Quoting will not form part of the word count.**

2. As you are writing a formal analytical exposition you are the expert and need to position your audience to understand that. To do this you form a hypothesis, a statement based on the task, and you support that with material from the text. You must be selective as to which information you include and omit from your essay.
eg If a hypothesis were: "Valentine is a loving father", you might choose to include the quote, "In the ten years since she had arrived in London Katherine had come to think of him as her best friend as well as her father" (p.36).

3. To form a hypothesis, you need to trace how Tom's views change as he moves through the various settings. What are his views about Municipal Darwinism at the start of the novel? Do they change?
You must refer specifically to the novel to support your claims.

4. The **TEEL** method of constructing a paragraph is a helpful tool to use for the body paragraphs.

T – Topic sentence
E – Expand/Explain
E – Evidence/Example
L – Link

T – TOPIC SENTENCE – Use a topic sentence at the start of the paragraph, clearly stating the main point of the paragraph.
- Support the hypothesis
- Sets up the paragraph
- Links to the question

E – EXPAND/EXPLAIN – Add details that support the topic sentence, but also narrowing the topic down to a smaller example. [Might be about a particular setting/event]
E – EVIDENCE/EXAMPLES – Support the details with evidence/quotes from the text
[Evidence and explanation can be in the same sentence if your references are integrated well]

L – LINK – Link each point with connectors but at the end of the paragraph make a comment that shows you understand how your E – Expansion/explanation and your E – Evidence support the hypothesis/main point.

Your link is very important as it shows that you understand why you have chosen the evidence and made those points. It may interpret, analyse or clarify information from the text.

5. **GRAMMAR:** Use third person, use present tense, use relational [to be, to have] and sensing/feeling [e.g. implies, suggests] verbs more than action verbs.

6. Give your essay a title.

Conditions

1. Approximately three weeks' notice of the task.
2. The genre will be explicitly taught.
3. You will have open access to most resources – dictionaries, family, friends, peers, guidelines, class notes.
4. Your story will be marked by your English teacher.

STUDENT DOCUMENTATION OF THE TEXT PRODUCTION PROCESS

1. To assist teachers in assessing student responses to tasks, you should provide written documentation that shows resources accessed during text production. You must provide evidence of the process of your work in order to prove authorship.

Resources	Support in text production: Who? Which? Where? When?
Material	
School or outside library	
Magazines	
Internet	
Human	
Teacher (including ESL and ASDP teachers)	
Tutor	
Peers	
Member of Family	
Librarian	

The assignment submitted is a reflection of the sources acknowledged above. The written text is, however, my own work except where otherwise indicated through appropriate referencing.

Student signature: _____ Date: _____

Rough draft attached: Teacher's signature: _____ Date: _____

Assignment submitted: Teacher's signature: _____ Date: _____

2. Complete a bibliography for "Mortal Engines"

Mortal Engines Analytical Expository Task

		A	B	C	D	E
		The student work has the following characteristics:				
Understanding and skills:: Receptive modes	Understanding Interpreting	• Discerning evaluation of relevant ideas and information from the novel to develop appropriate and justified interpretations	• Effective evaluation of relevant ideas and information from the novel to develop appropriate and justified interpretations	• Analysis of relevant ideas and information from the novel to develop appropriate and justified interpretation	• Explanation of ideas and information from the novel to form interpretations	• Identification of ideas and information from the novel
	Analysis of how a text informs, represents and positions an audience	• Comprehensive analysis of how a variety of language features achieve different purposes	• Effective analysis of how a variety of language features achieve different purposes	• Explanation of how a variety of language features achieve different purposes	• Description of how language features achieve different purposes	• Identification of language features

Understanding and skills: Productive modes	Use of content to inform, to substantiate, to represent and to position own text:	• Discerning selection, sequencing and synthesis of a variety of relevant ideas and information to support different viewpoints, attitudes and perspectives	• Effective selection, sequencing and synthesi s of a variety of relevant ideas and information to support different viewpoints, attitudes and perspectives	• Selection, sequencing and synthesis of a variety of relevant ideas and information to support different viewpoints, attitudes and perspectives	• Selection and combinatio n of ideas and information to support viewpoints and attitudes	• Use of ideas and information to state an opinion
	Genre – structuring (organising) a text:	• Discerning use of essay structure to achieve different purposes and effects	• Effective use of essay structure to achieve different purposes and effects	• Use of a variety essay structure to achieve different purposes and effects	• Use of essay structure to achieve different purposes	• Use of aspects of essay structures
	Using text features (grammar, spelling, punctuation, vocabulary) to inform, to represent and to position	• Discerning use of a range of grammatical structures and vocabulary to achieve different purposes and effects	• Effective use of a range of grammatical structures and vocabulary to achieve different purposes and effects	• Use of a range of grammatical structures and vocabulary to achieve different purposes and effects	• Use of grammatica l structures and vocabulary to achieve different purposes	• Use of a narrow range of grammatical structures and vocabulary
	Specific micro mode and medium appropriateness (evaluative vocabulary, figurative language, rhetorical devices)	• Discerning use of a variety of text and language features to achieve different purposes and effects: *written features[1]	• Effective use of a variety of text and language features to achieve different purposes and effects: *written features	• Use of a variety of text and language features to achieve different purposes and effects: *written features	• Use of text and language features that vary in suitability: *written features	• Use of text and language features that impede meaning: *written features

Overall Standard:
Teacher Comments:

Teacher Initials:
Date:

*** For example: punctuation and spelling**